

Figure 1

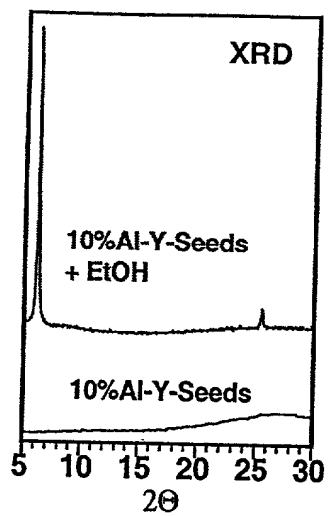


Figure 2A

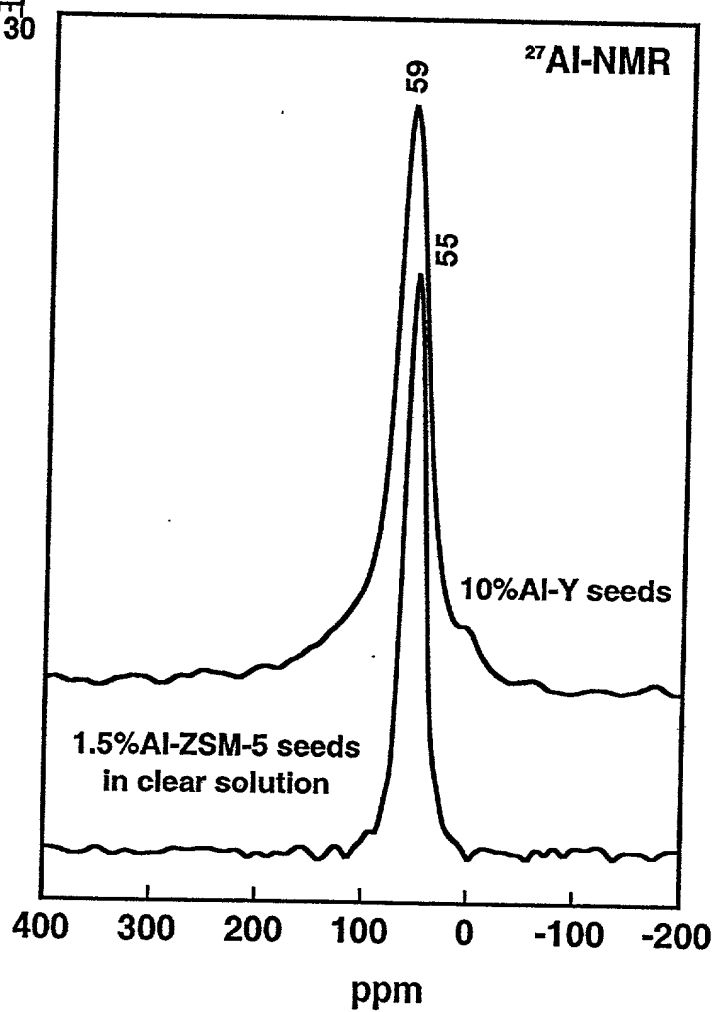


Figure 2

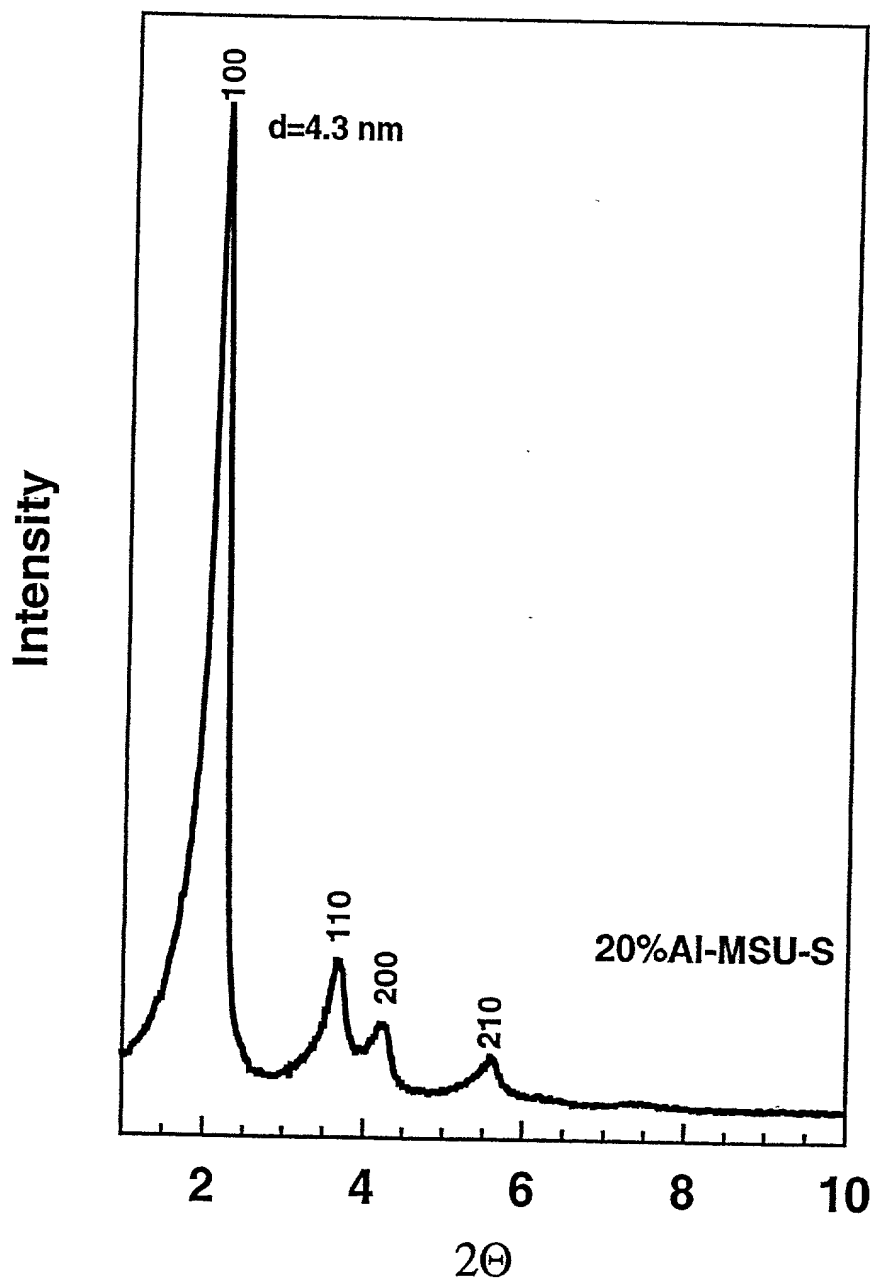


Figure 3

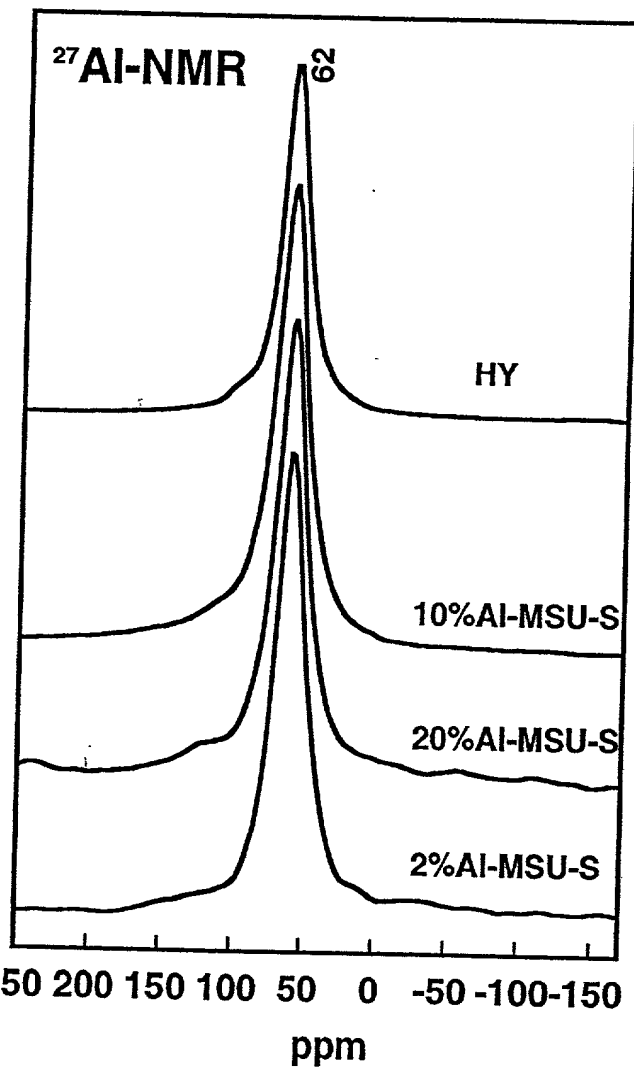


Figure 4

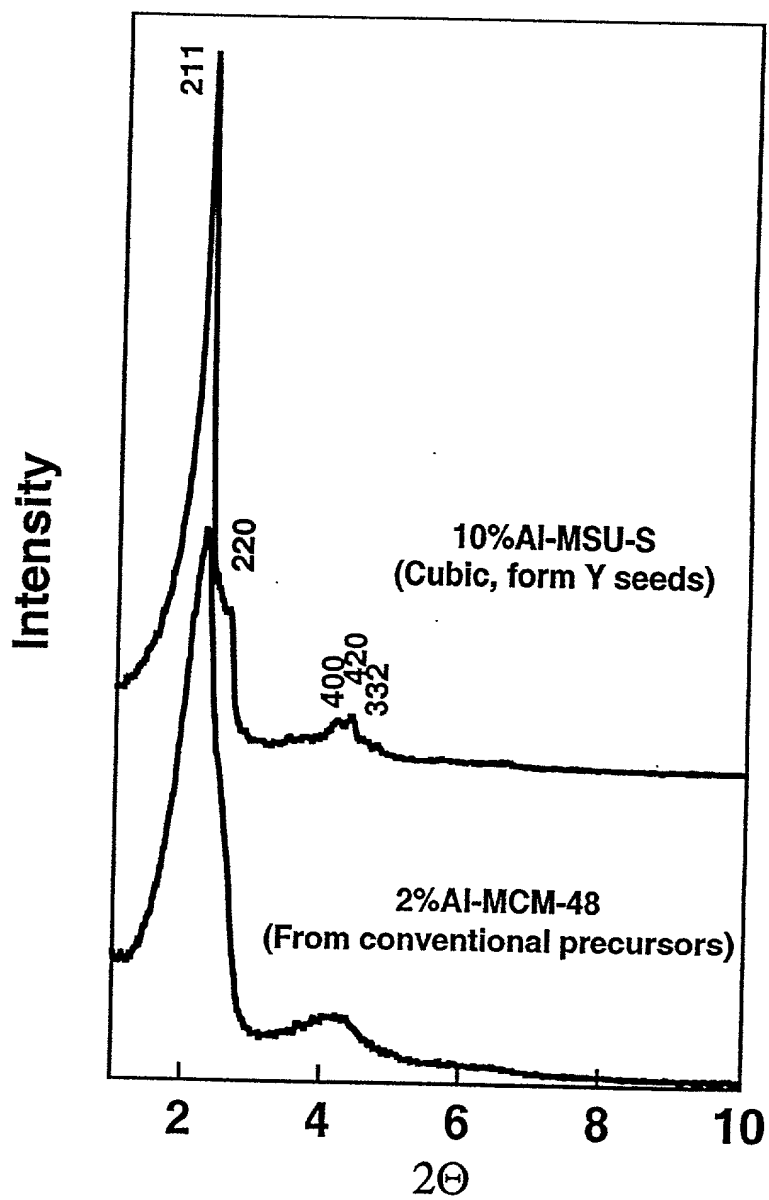


Figure 5

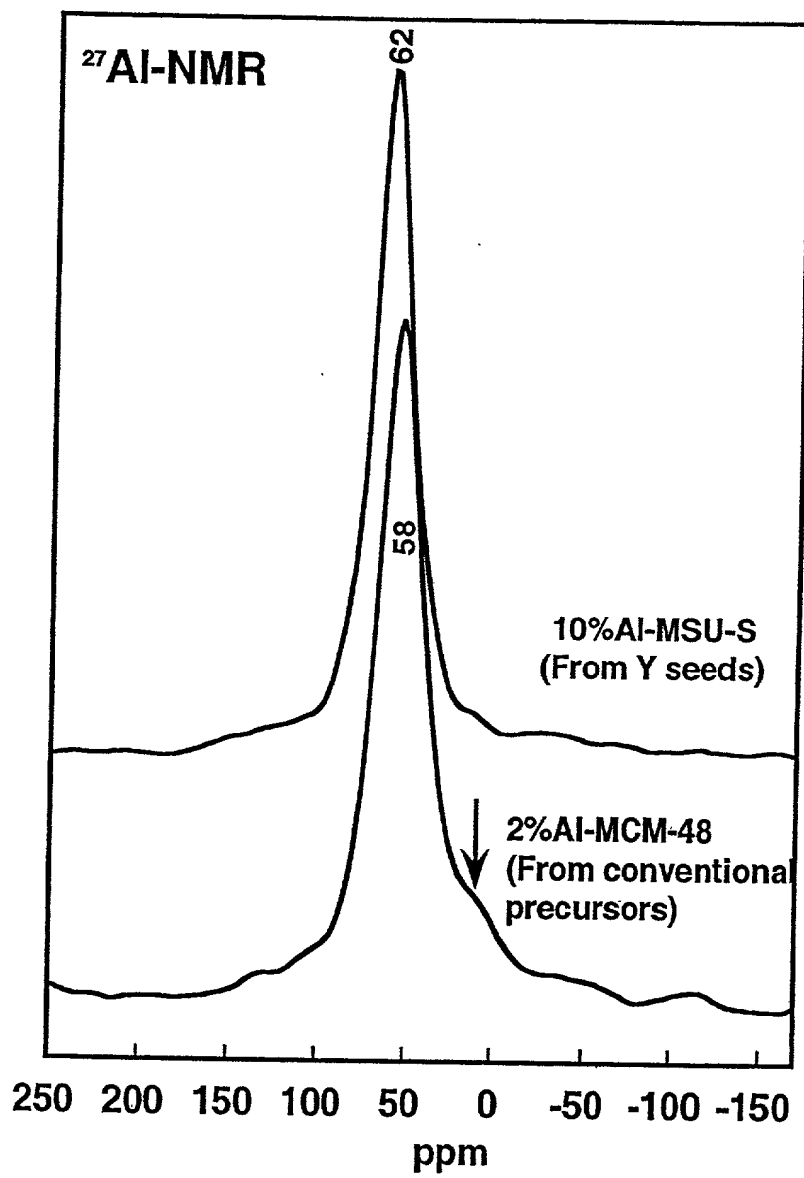


Figure 6

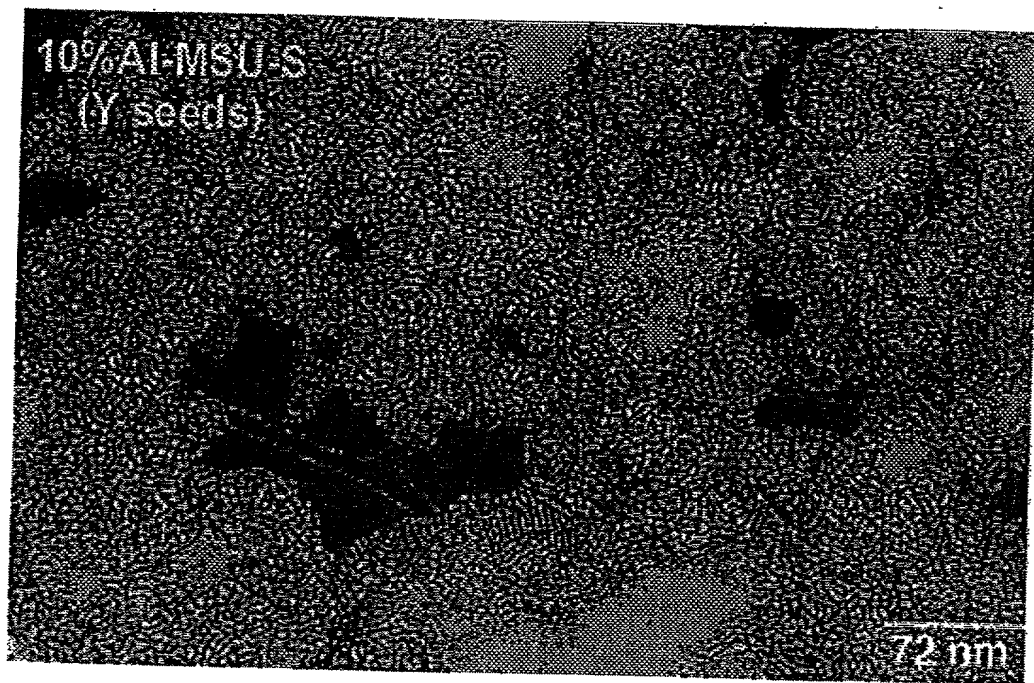


Figure 7

**$S_{\text{BET}}$ : 677 m<sup>2</sup>/g**  
**Pore Vol: 1.27 cc/g**

**10%Al-MSU-S**  
**From Y-seeds**

100



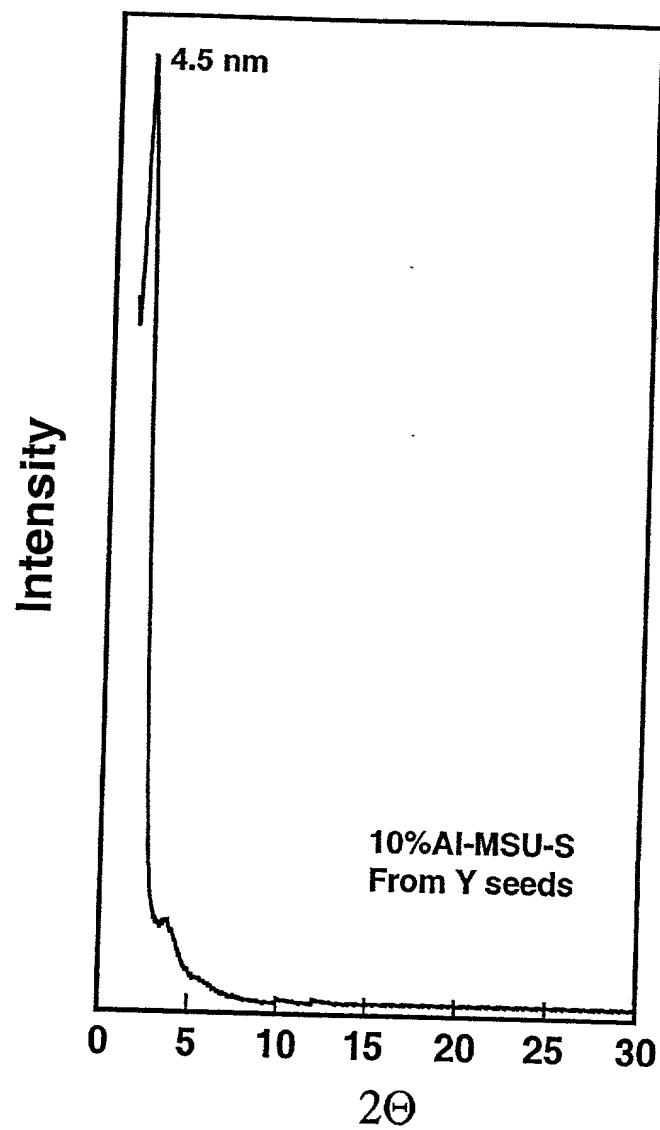


Figure 9

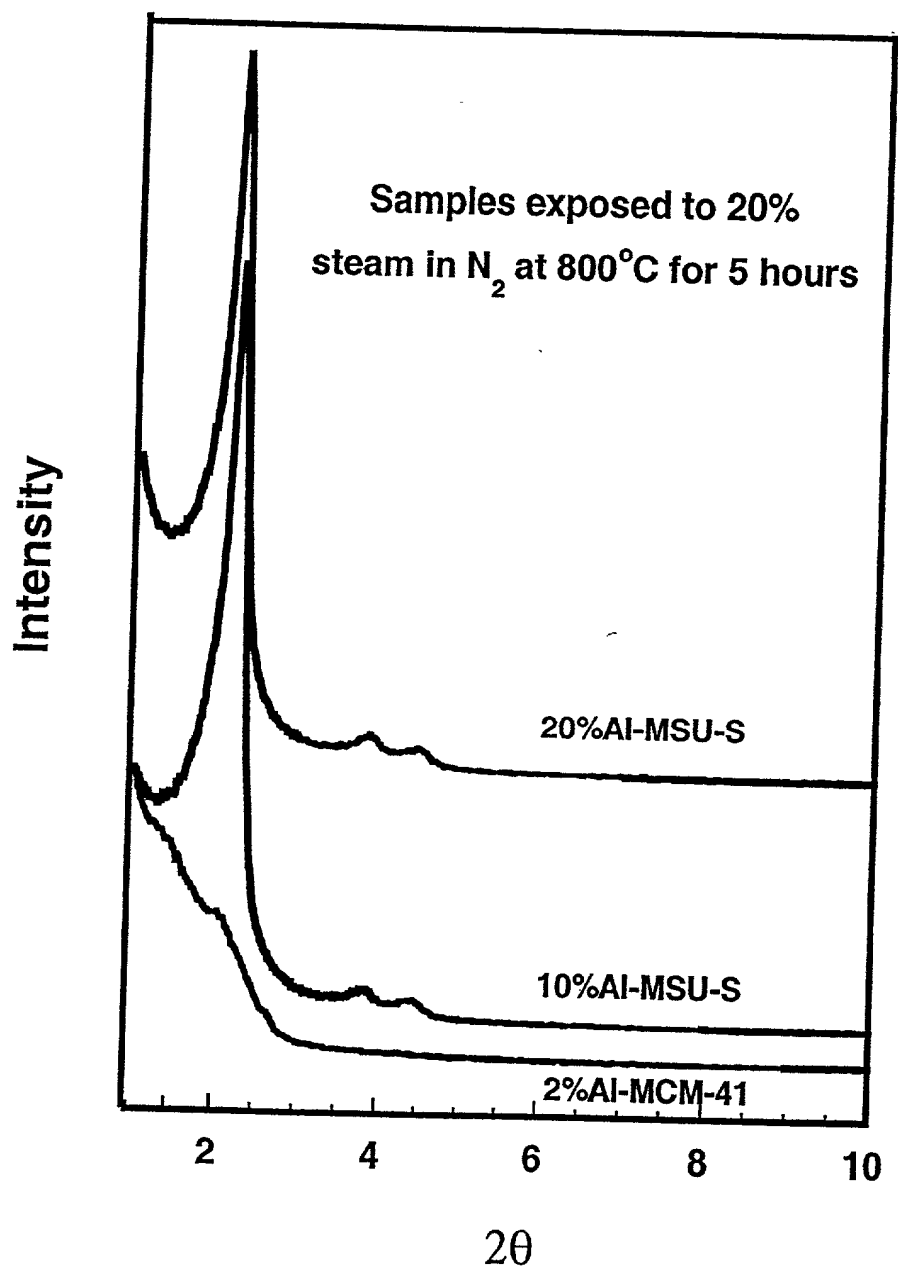


Figure 10

# Testing of Mokaya's Al-MCM-41(Si/Al=6.1)

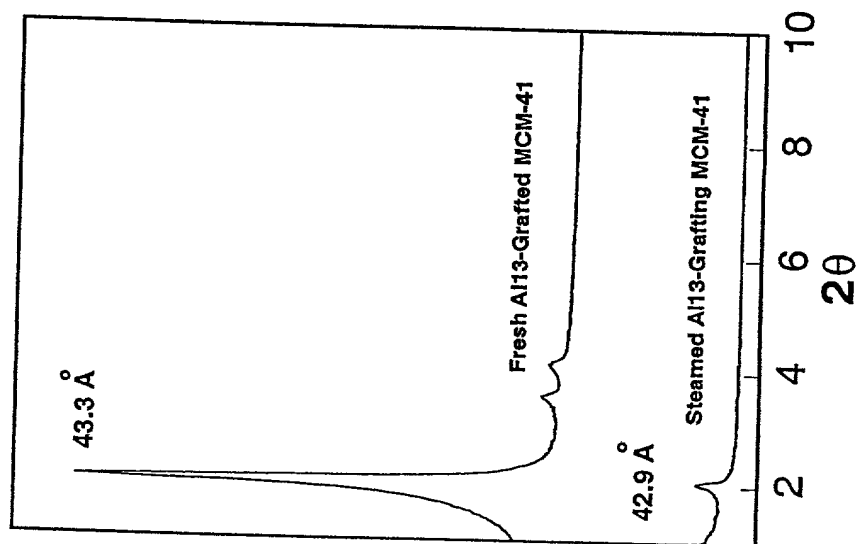


Figure 11A

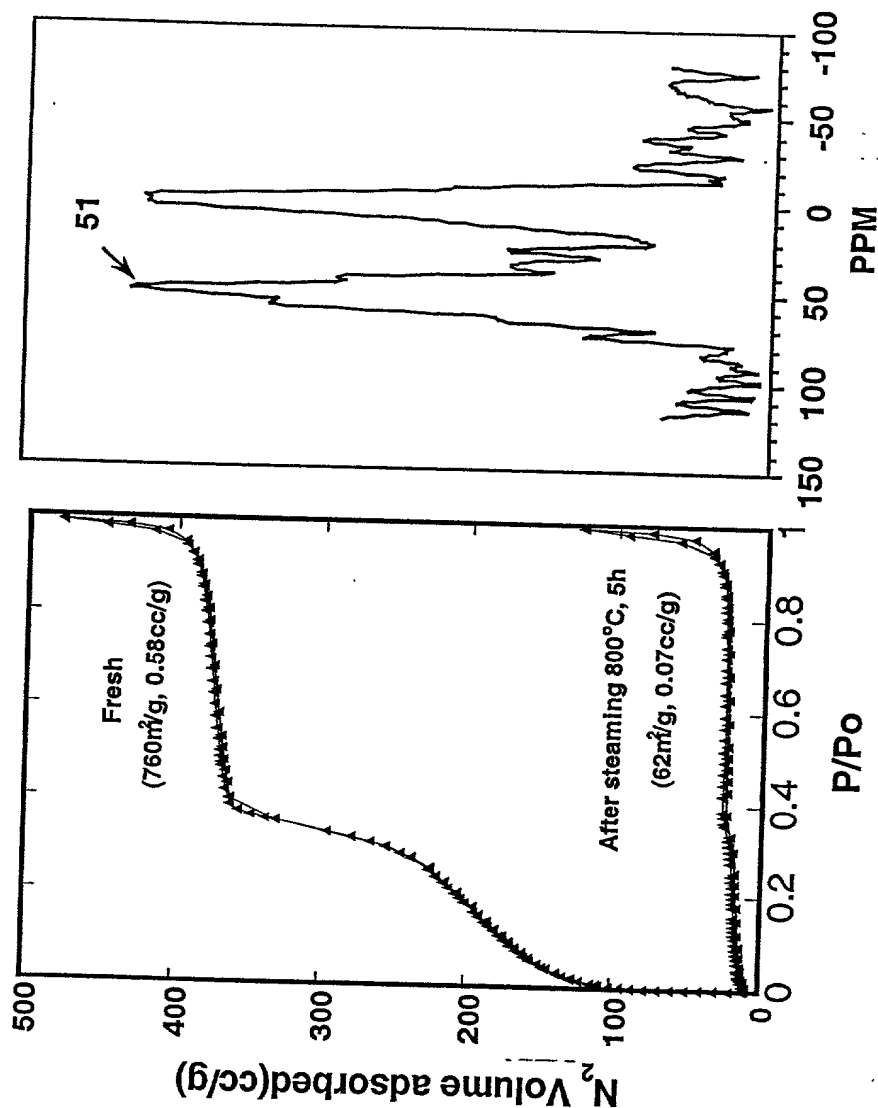


Figure 11B

Figure 11C

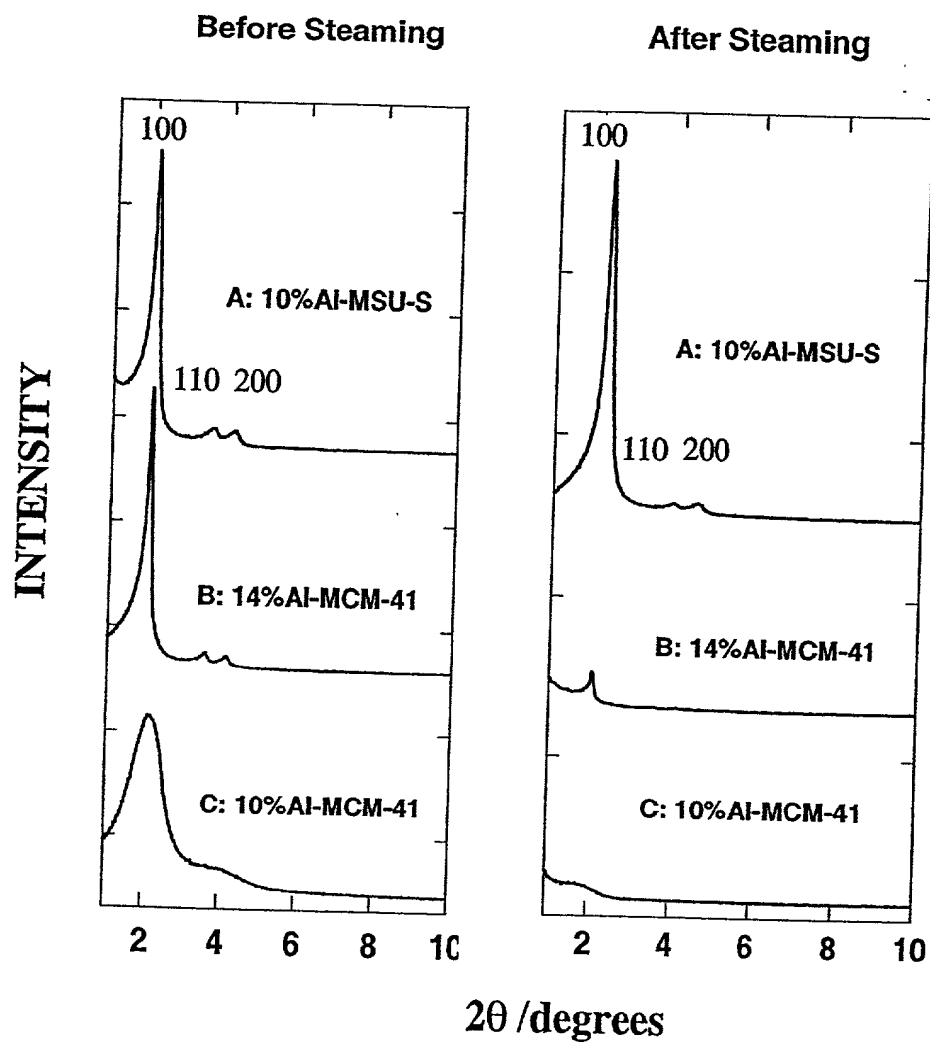
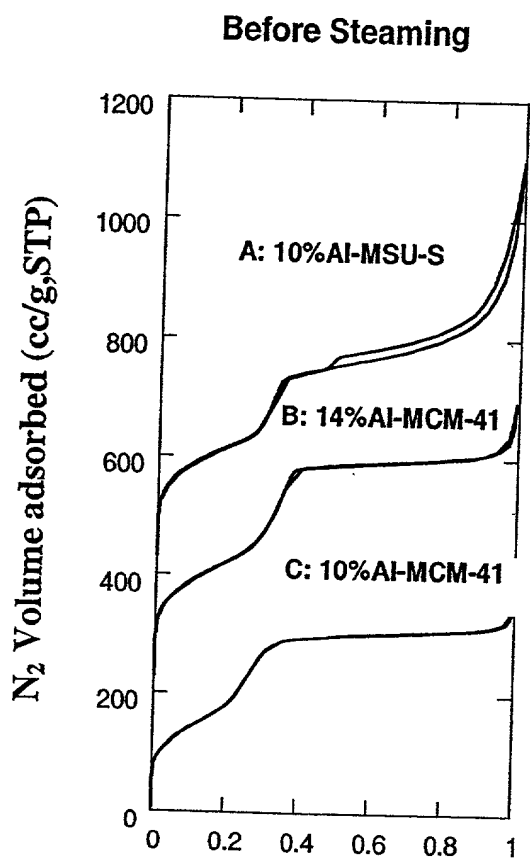


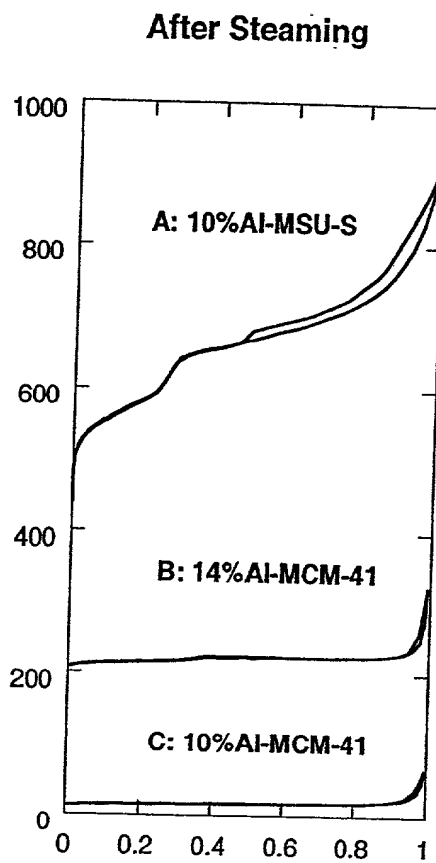
Figure 12A

Figure 12B

10547 443300



**Figure 13A**



**Figure 13B**

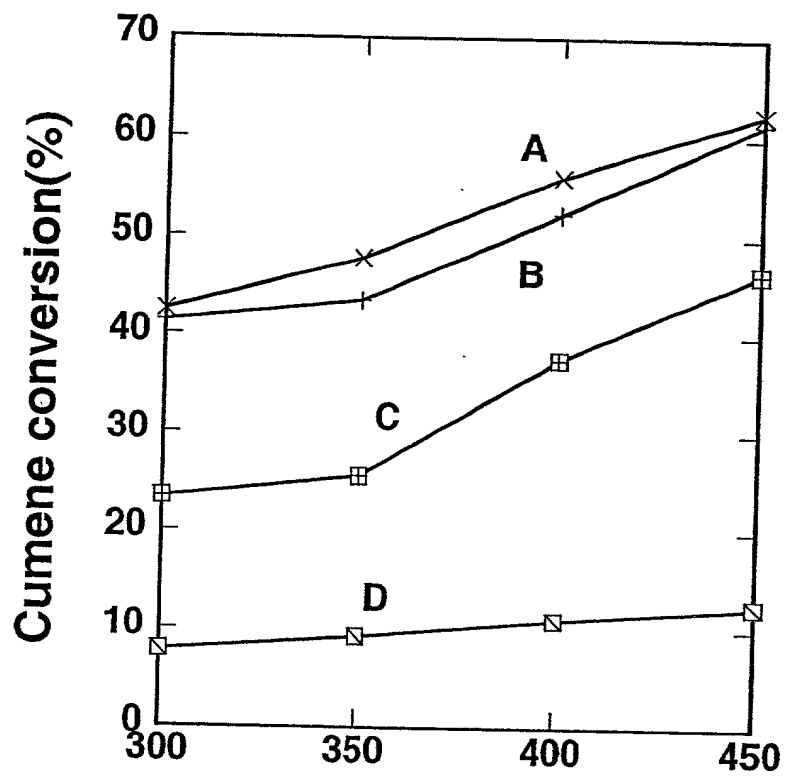


Figure 14

# IR Spectra

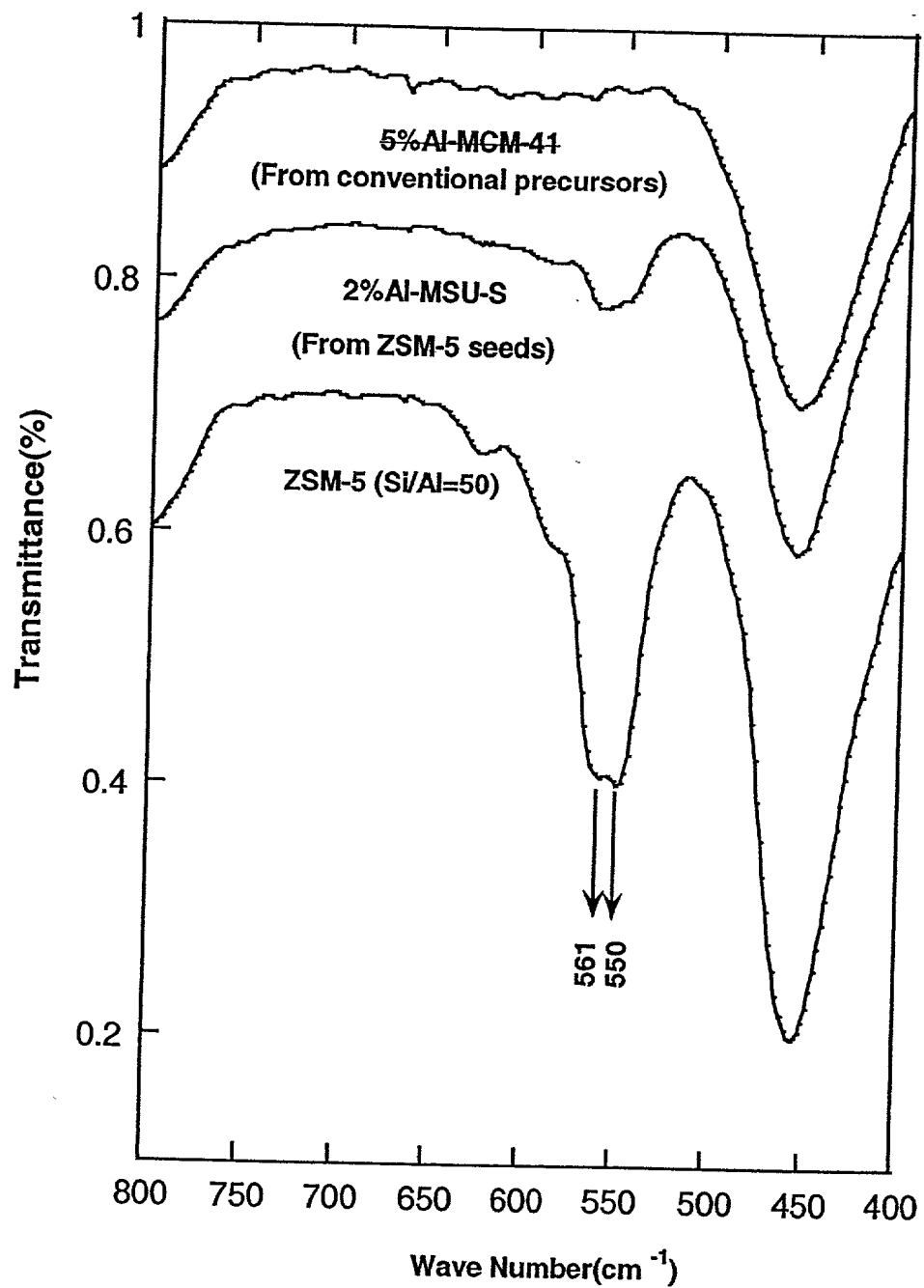


Figure 15

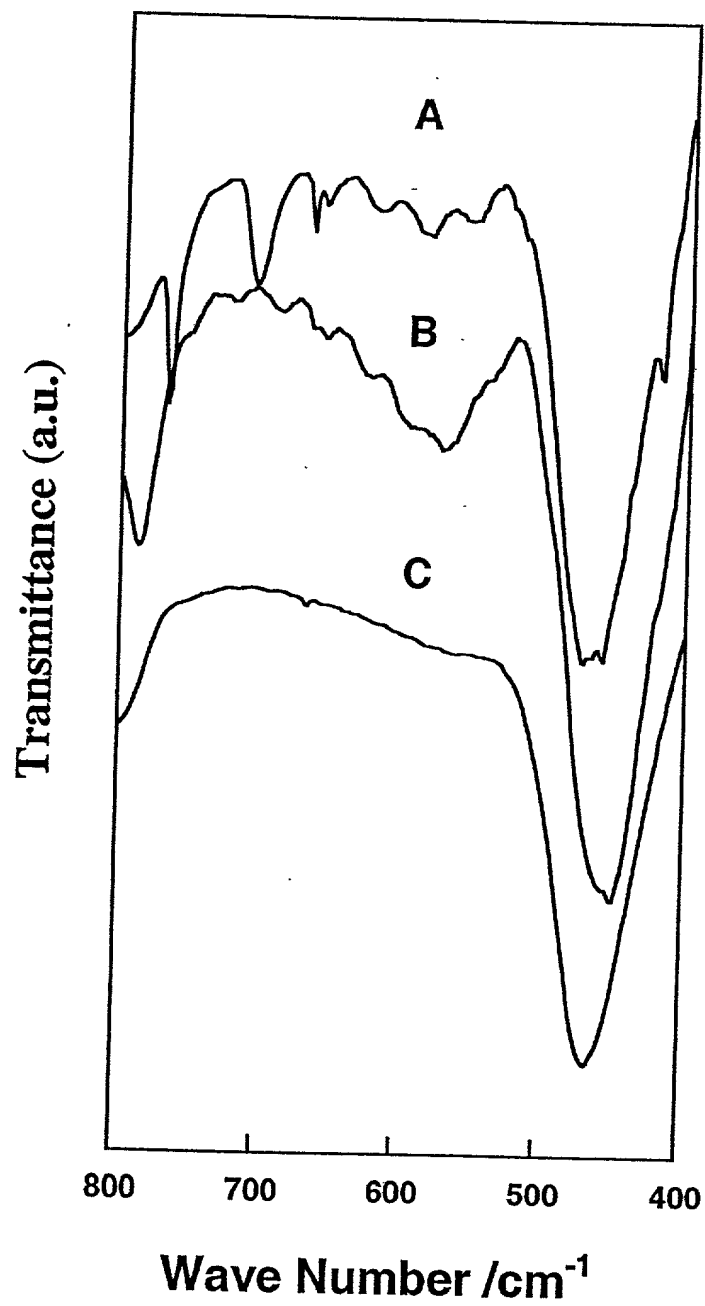
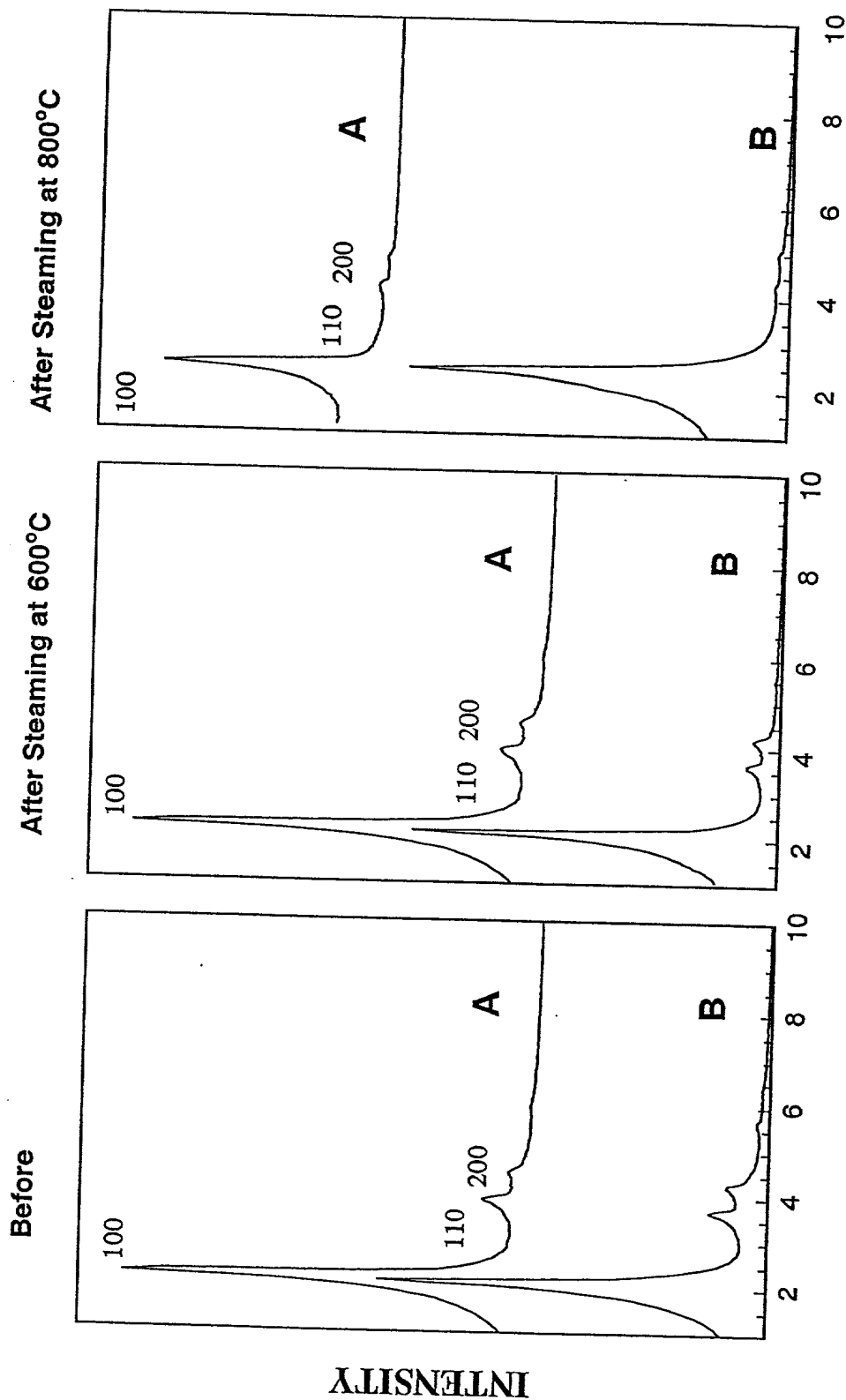


Figure 16





**Figure 18B**

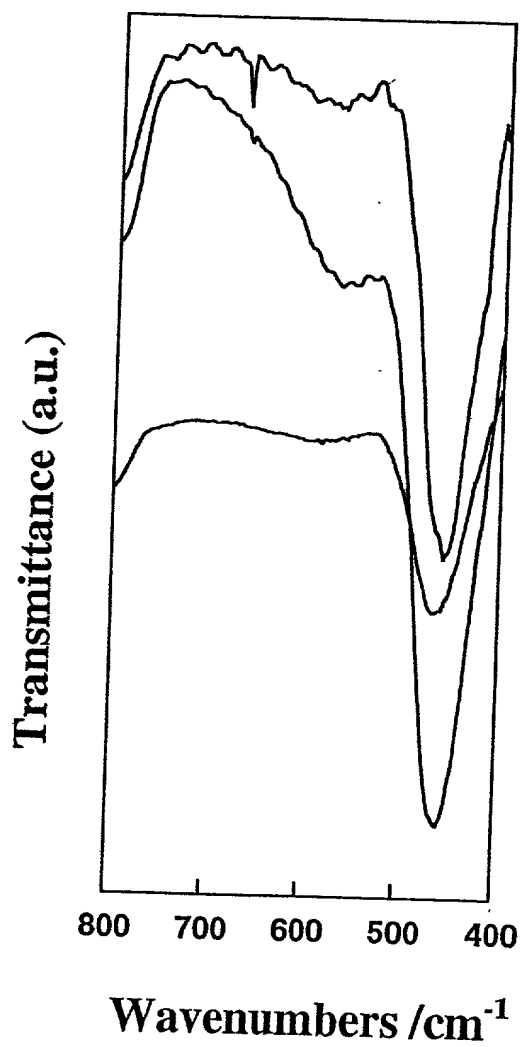


Figure 19

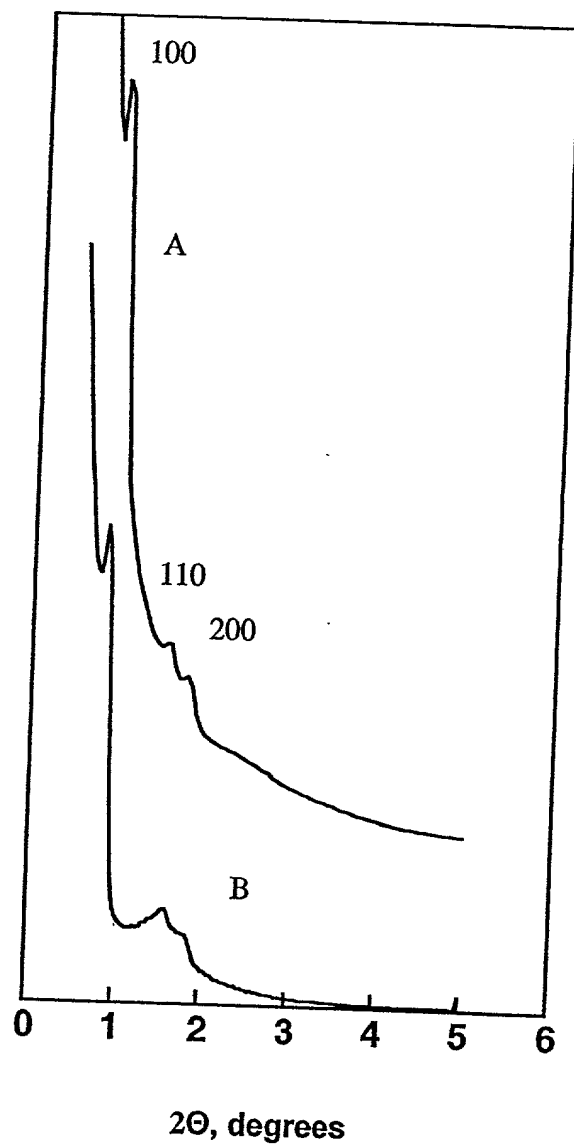


Figure 20

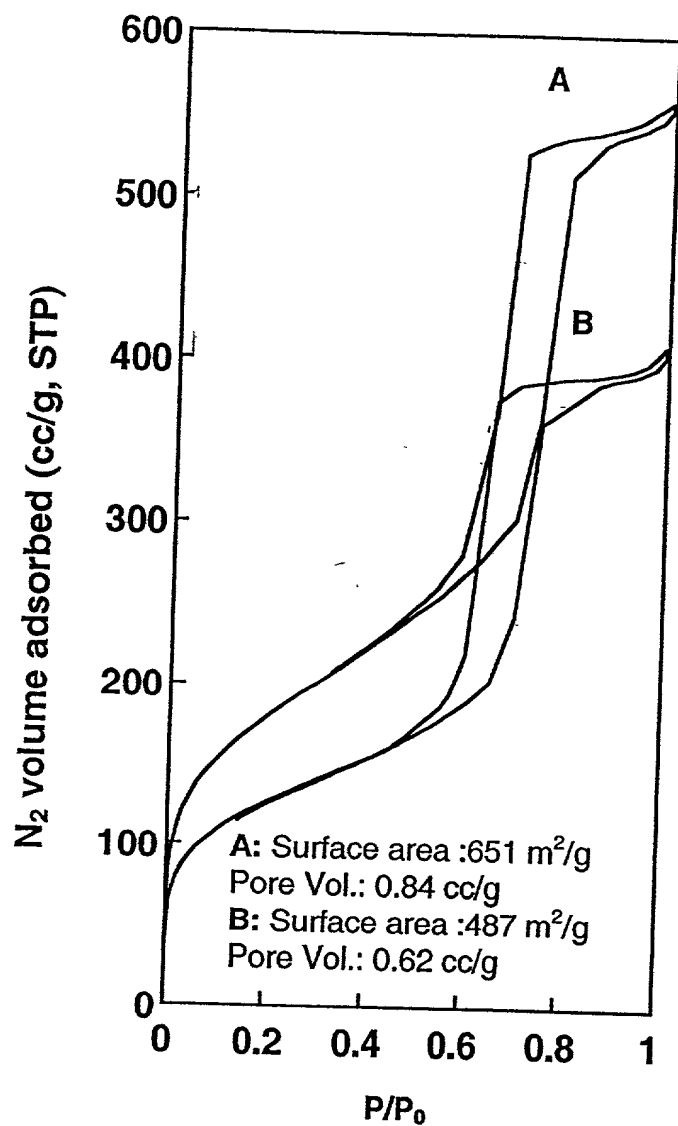


Figure 21

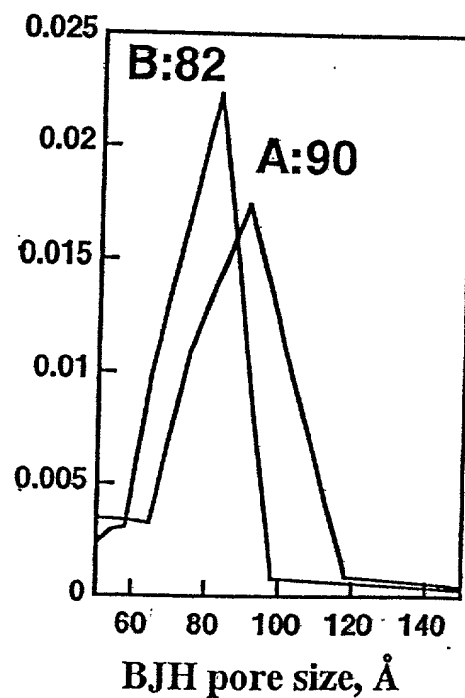


Figure 21A

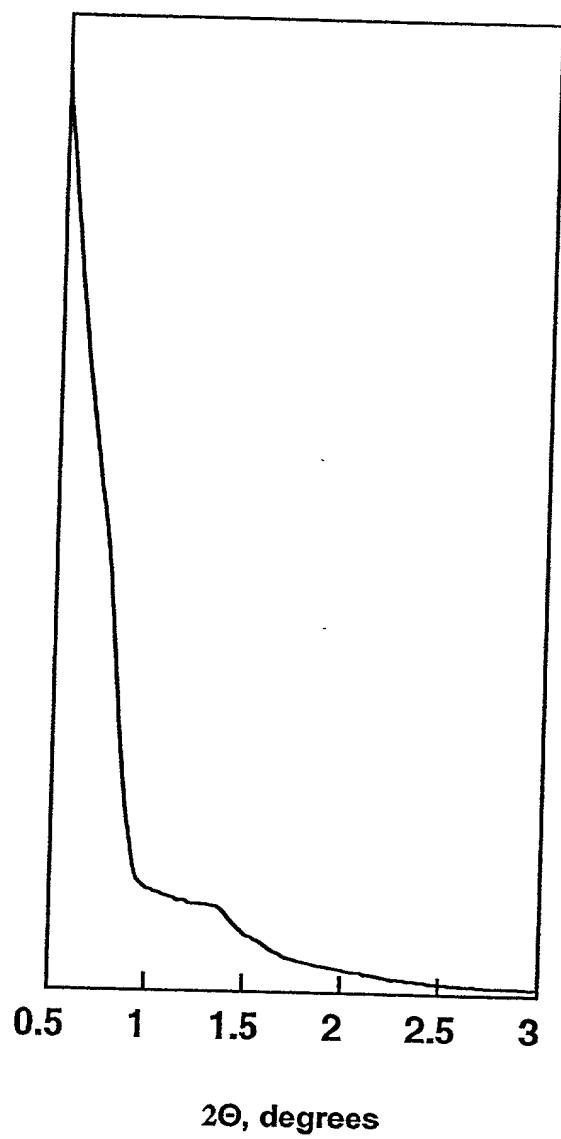


Figure 22

1037-495001

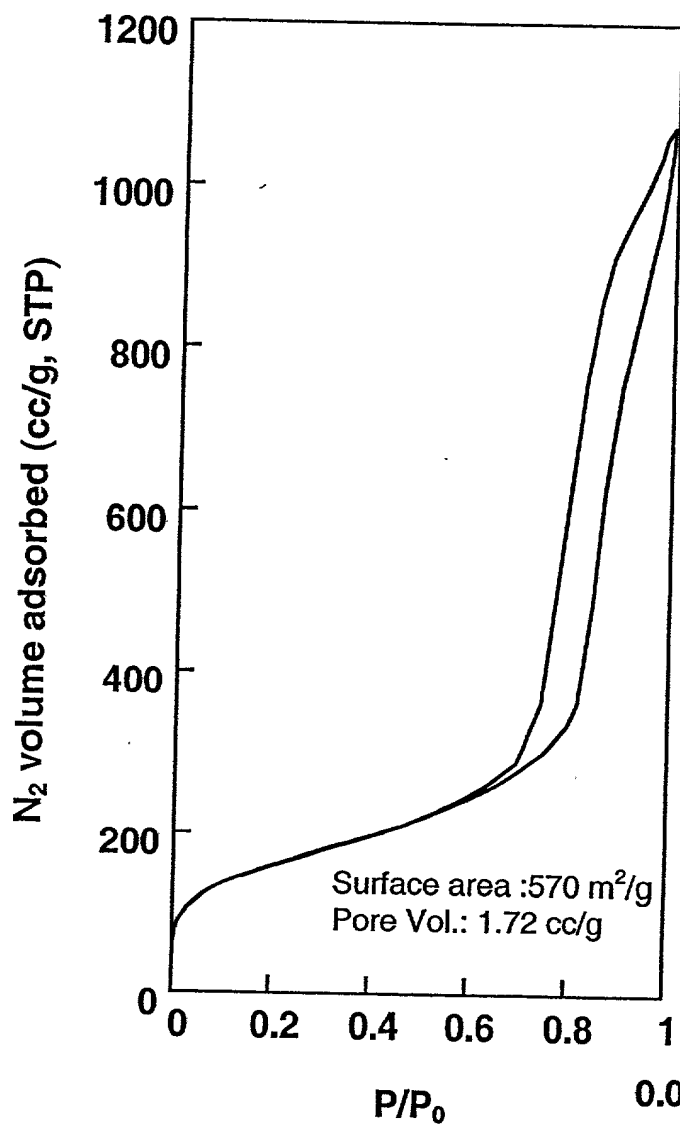


Figure 23

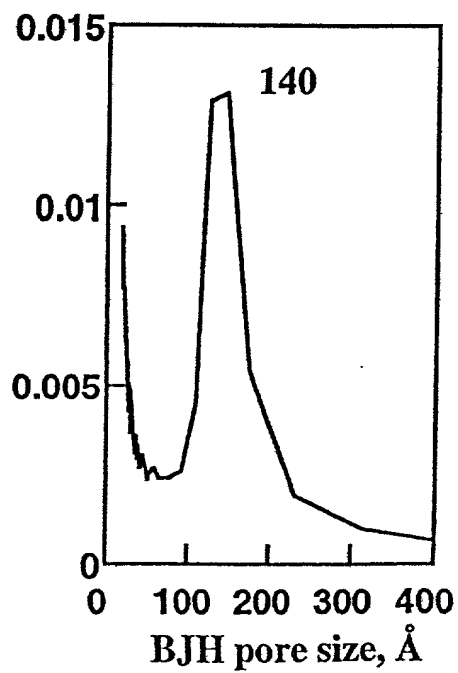


Figure 23A

Surface area : 751 m<sup>2</sup>/g  
Pore Vol.: 1.21 cc/g

Figure 24A is a BJH pore size distribution plot. The y-axis is labeled with values 0, 0.005, and 0.01. The x-axis is labeled "BJH pore size, Å" and ranges from 0 to 500 with major ticks every 100 units. The plot shows a single, sharp peak at a pore size of 153 Å, which is labeled above the peak. The peak height is approximately 0.009. The curve starts at a high value near 0 Å, drops to a minimum of about 0.005 at 100 Å, and then rises to the peak at 153 Å before falling sharply to near zero by 300 Å.



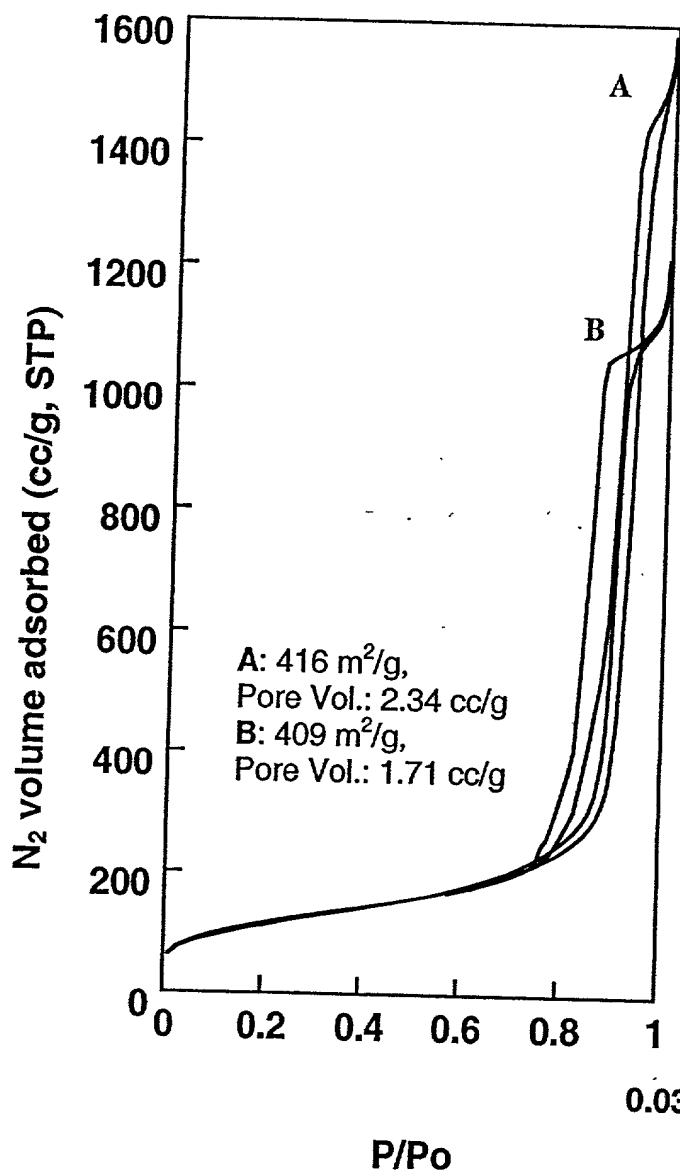


Figure 25

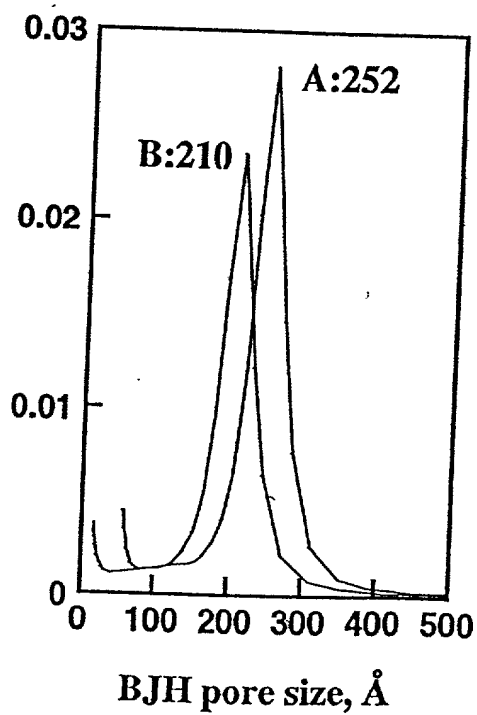


Figure 25A

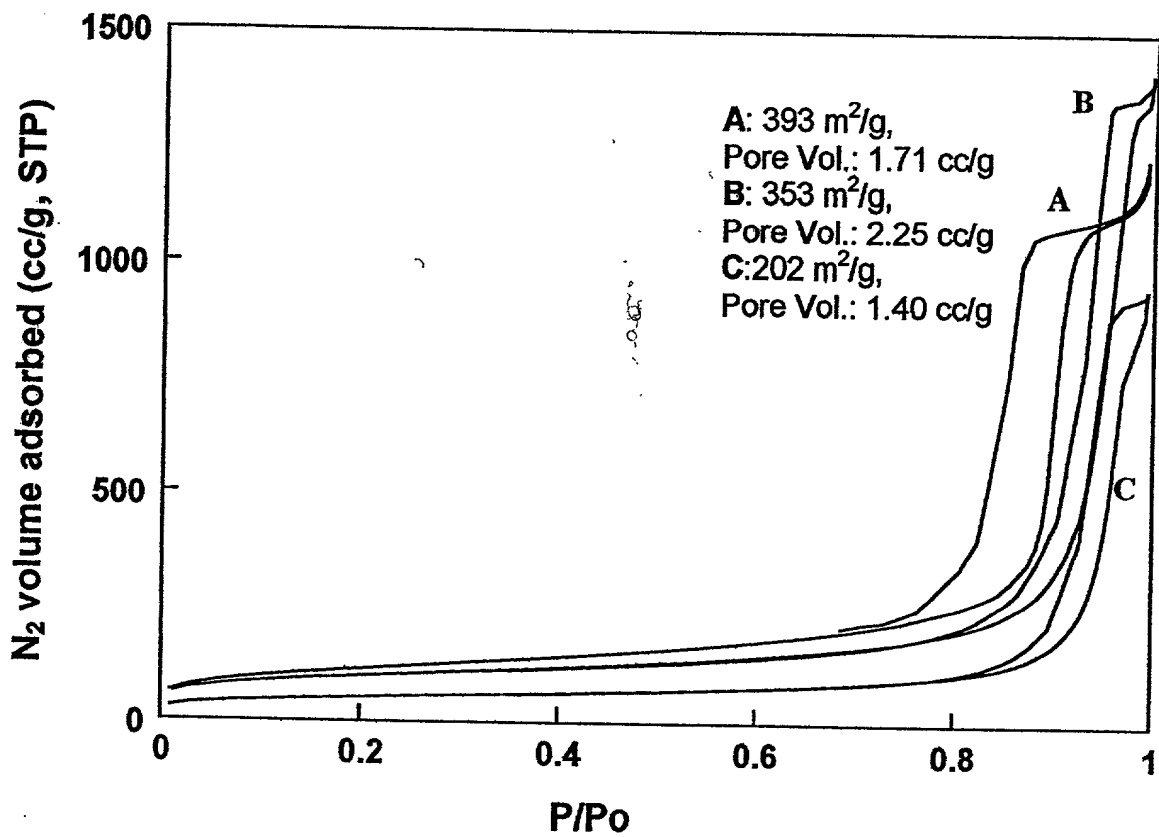


Figure 26

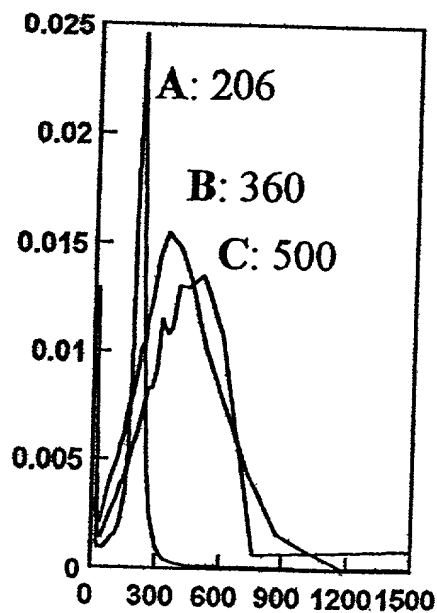


Figure 26A

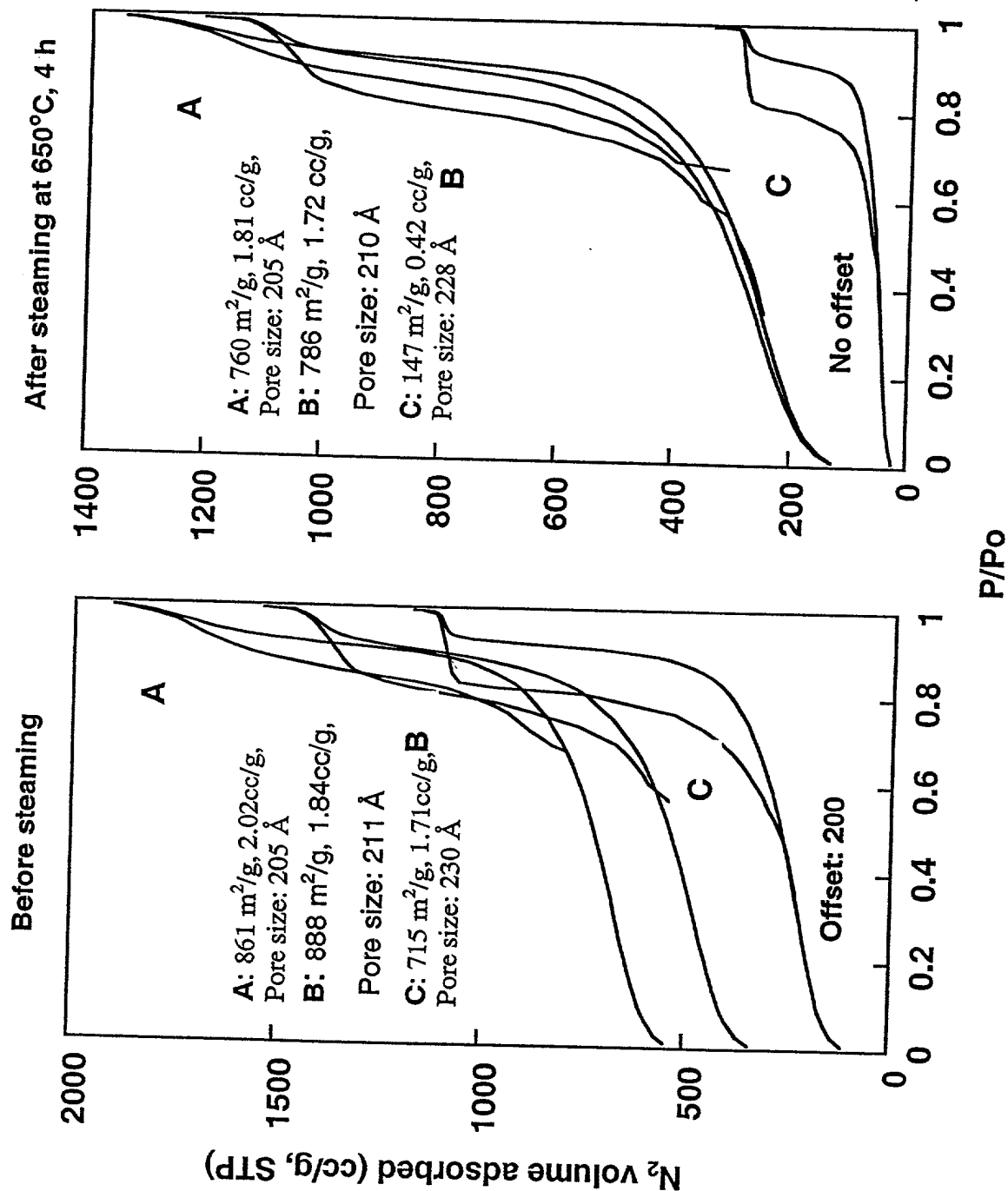


Figure 27A

Figure 27B

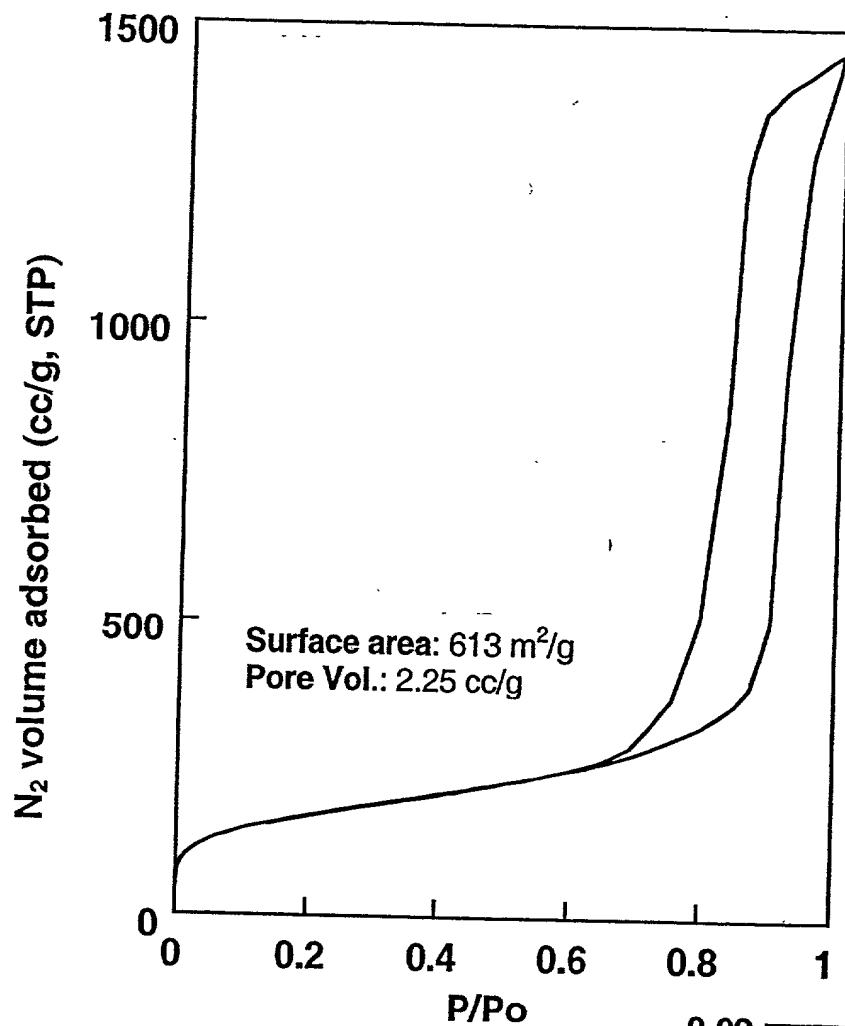


Figure 28

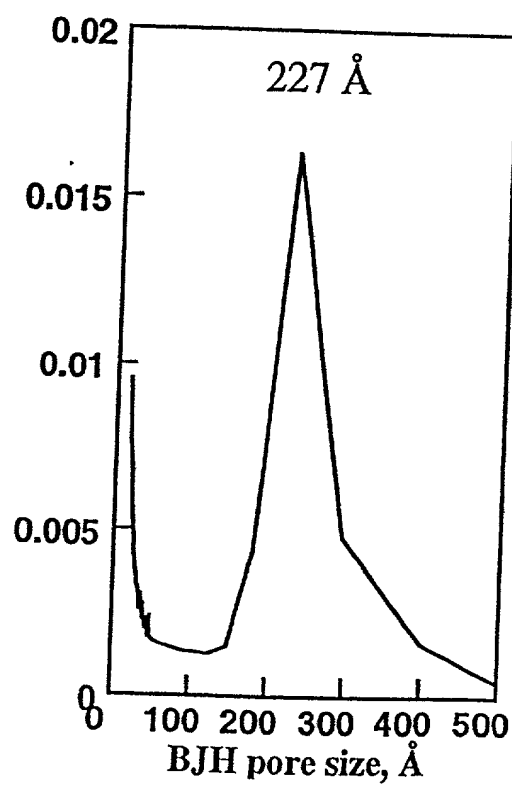


Figure 28A

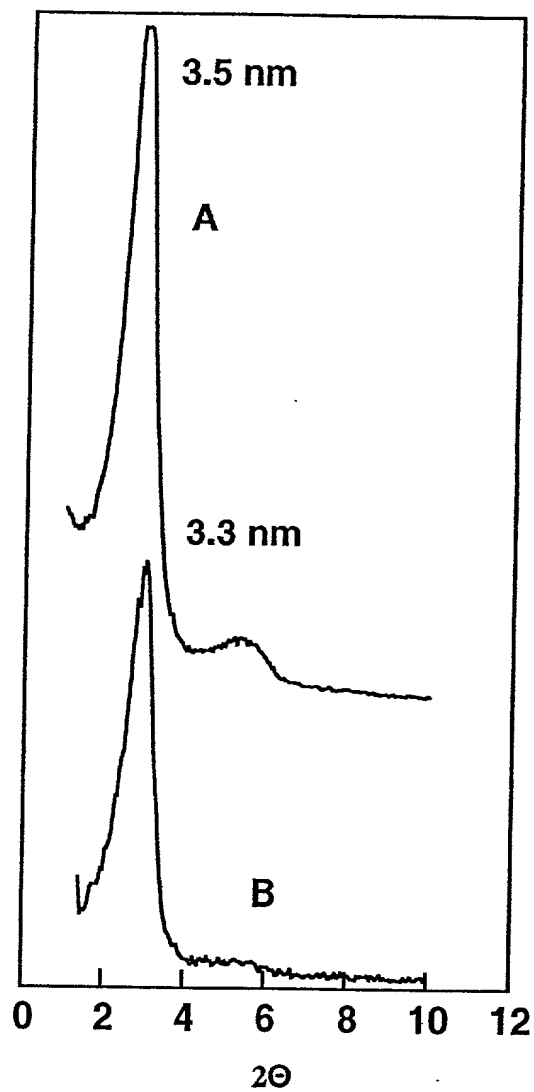


Figure 29

Detailed description of Figure 1: The graph plots two curves, labeled 16 and 19, representing pore size distributions. The x-axis is labeled 'HK pore size, Å' and has major tick marks at 10, 15, 20, 25, and 30. The y-axis has major tick marks at 0, 0.005, 0.01, 0.015, 0.02, 0.025, 0.03, and 0.035. Curve 16 is a solid line that starts at a value of about 0.024 at 10 Å, decreases to a local minimum of about 0.014 at 15 Å, and then rises to a peak of about 0.025 at 16 Å before declining. Curve 19 is a dashed line that starts at about 0.020 at 10 Å, decreases to a local minimum of about 0.014 at 15 Å, and then rises to a peak of about 0.028 at 20 Å before declining sharply.

| HK pore size (Å) | Curve 16 (Solid line) | Curve 19 (Dashed line) |
|------------------|-----------------------|------------------------|
| 10               | 0.024                 | 0.020                  |
| 12               | 0.016                 | 0.016                  |
| 14               | 0.014                 | 0.014                  |
| 16               | 0.025                 | 0.015                  |
| 18               | 0.010                 | 0.025                  |
| 20               | 0.004                 | 0.028                  |
| 22               | 0.002                 | 0.005                  |
| 24               | 0.001                 | 0.002                  |
| 26               | 0.001                 | 0.001                  |
| 28               | 0.001                 | 0.001                  |
| 30               | 0.001                 | 0.001                  |

**Figure 30A**

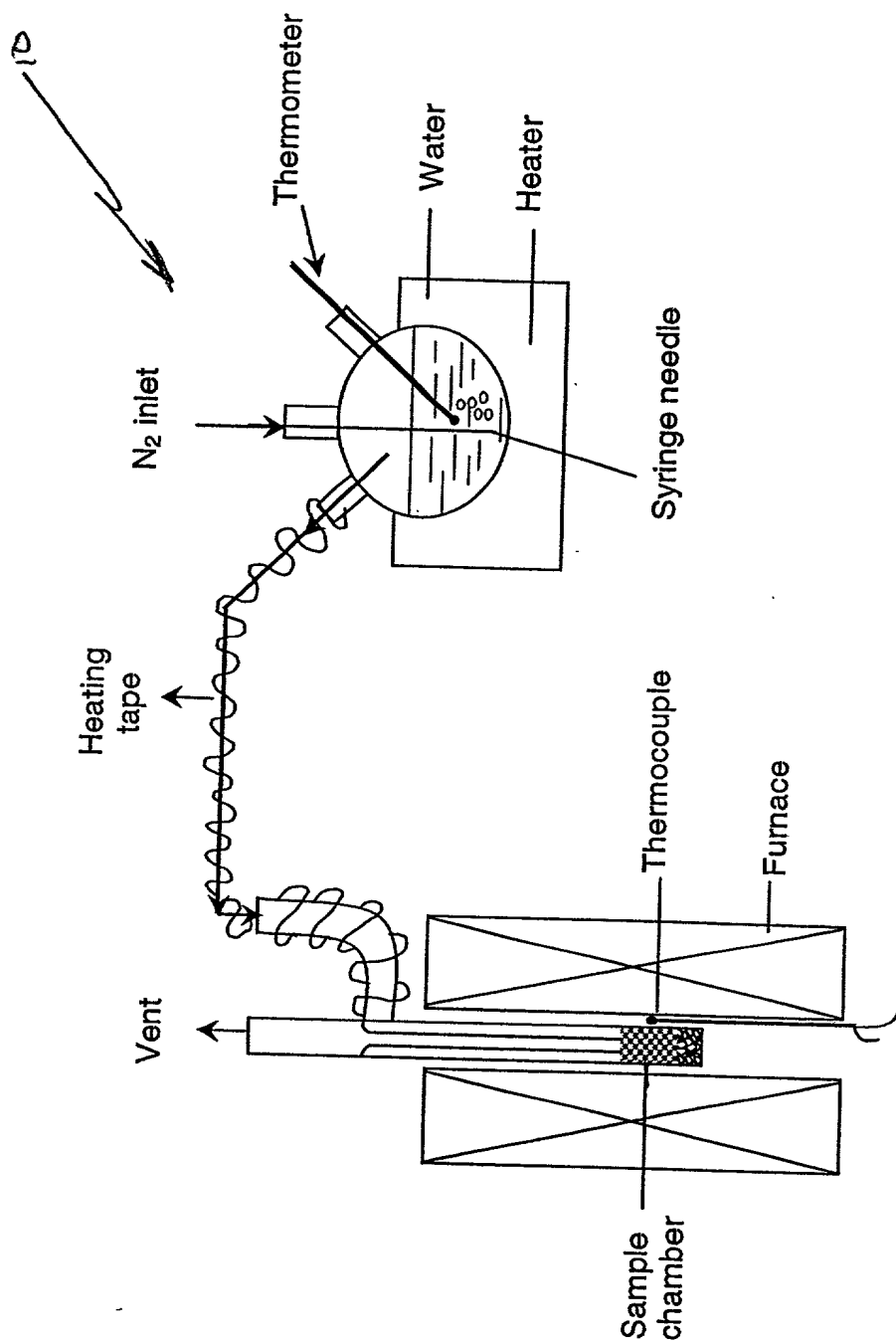


Figure 31

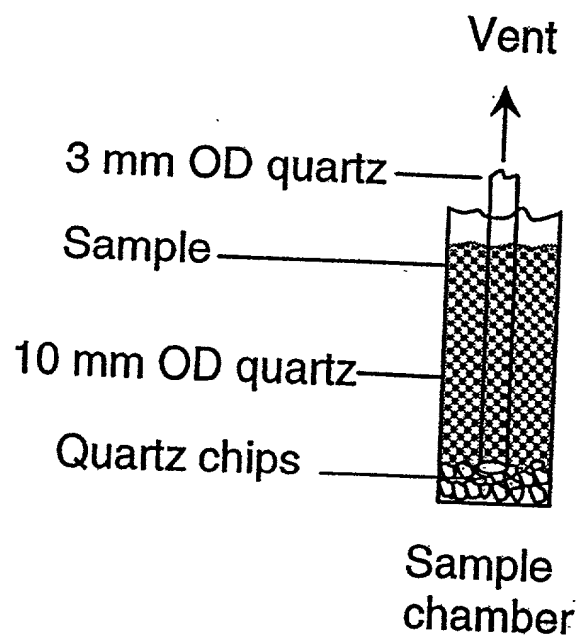
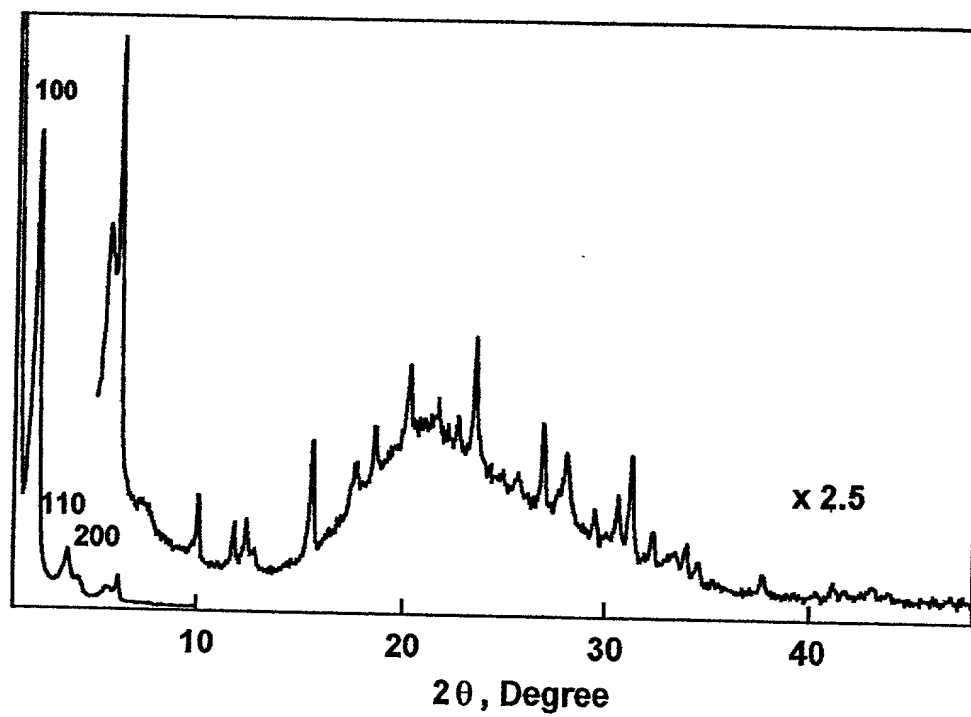


Figure 31A



FIGURE 32 (Example 31)



1005547 191504

FIGURE 33 (Sample 31)

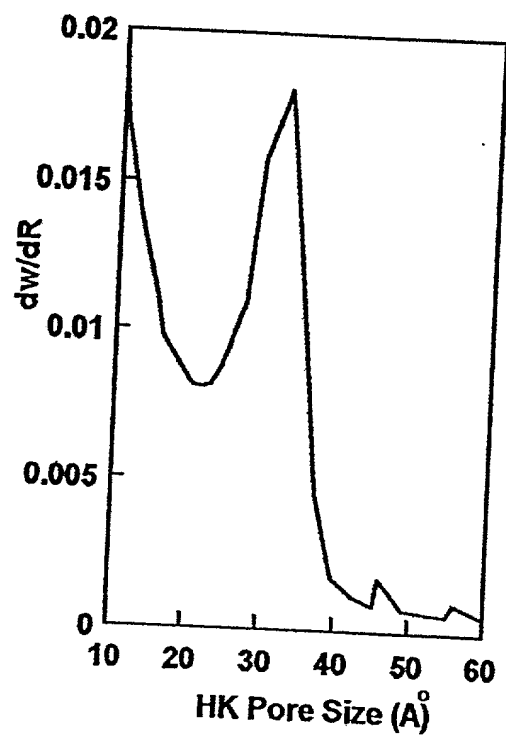
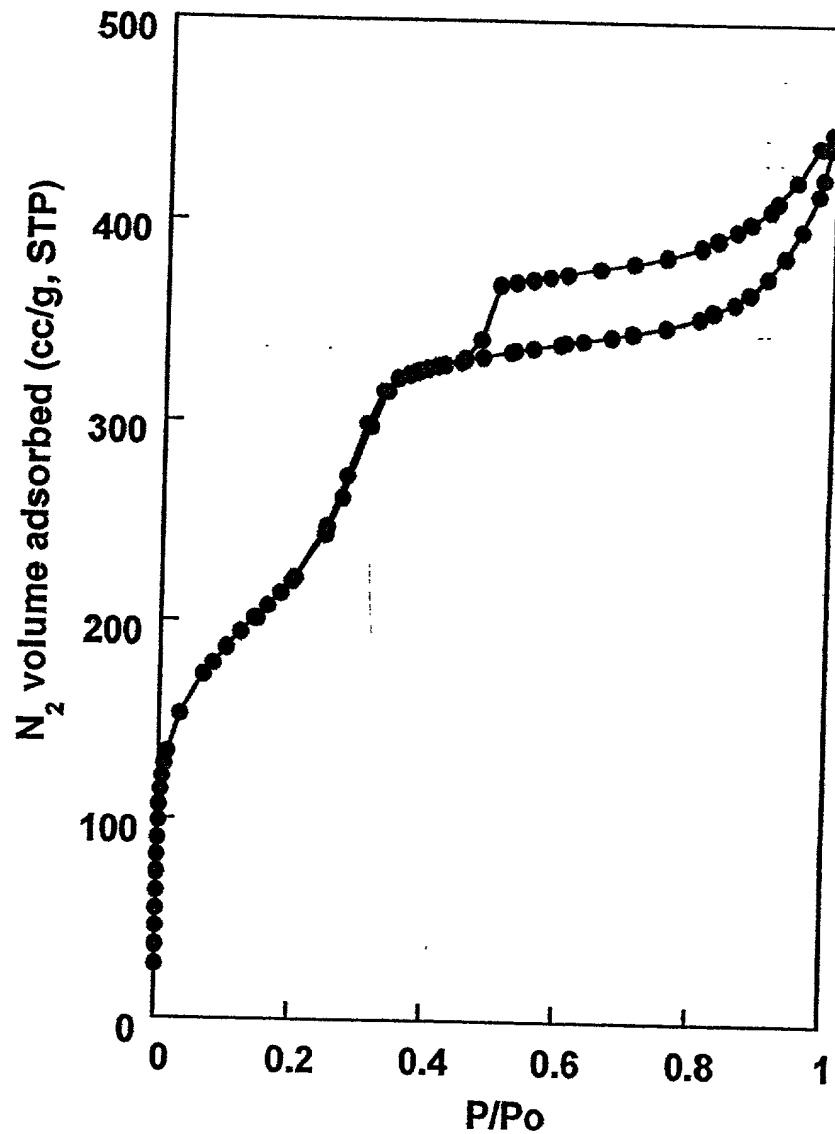
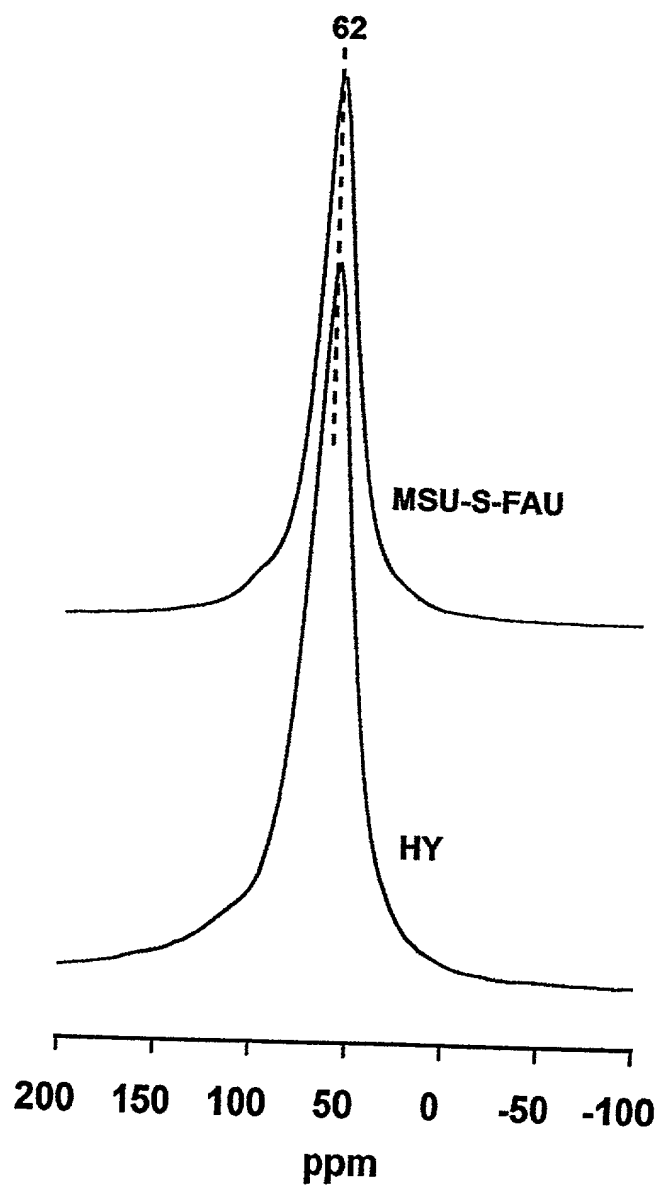


FIGURE 33A

[illegible]

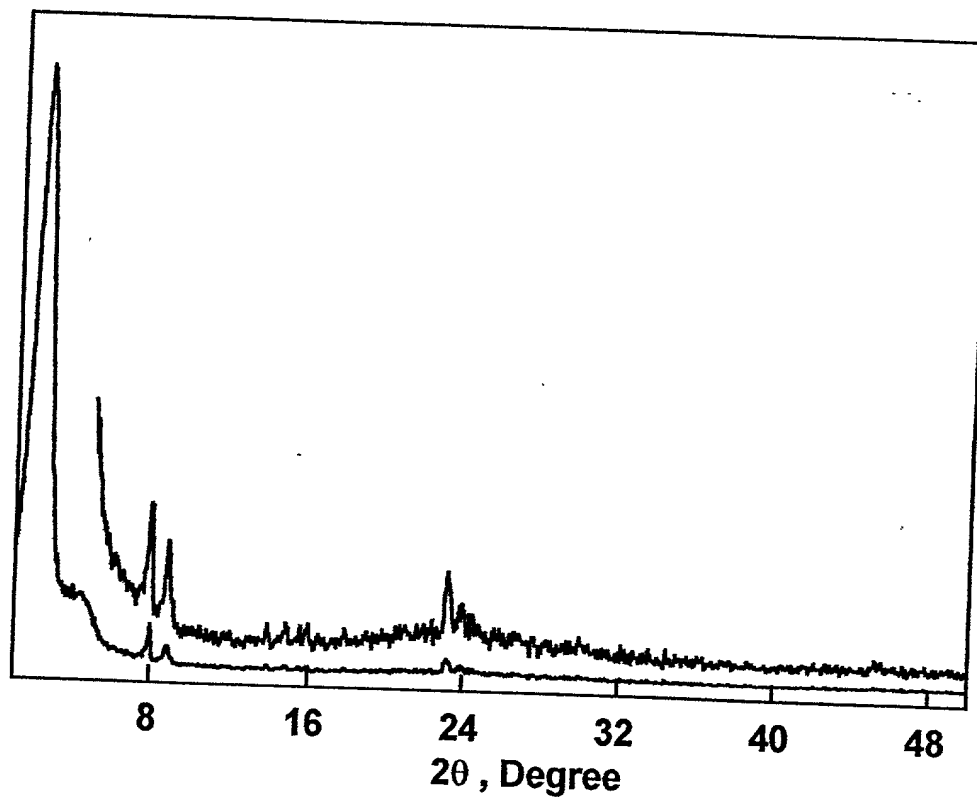
[illegible]

FIGURE 36 (Example 32)

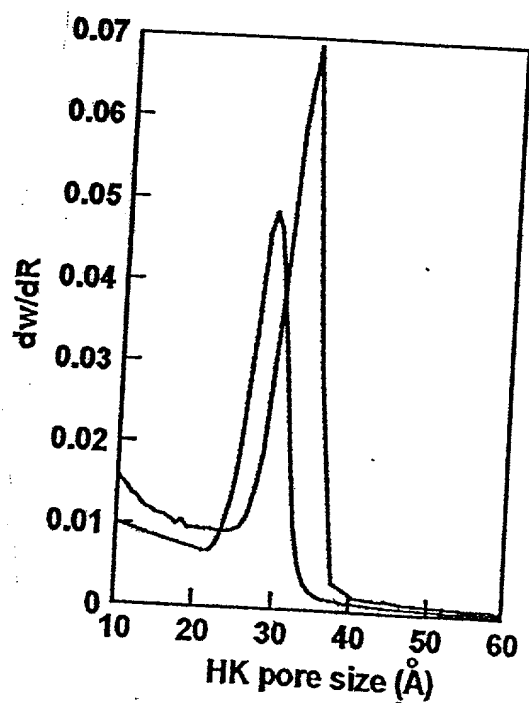
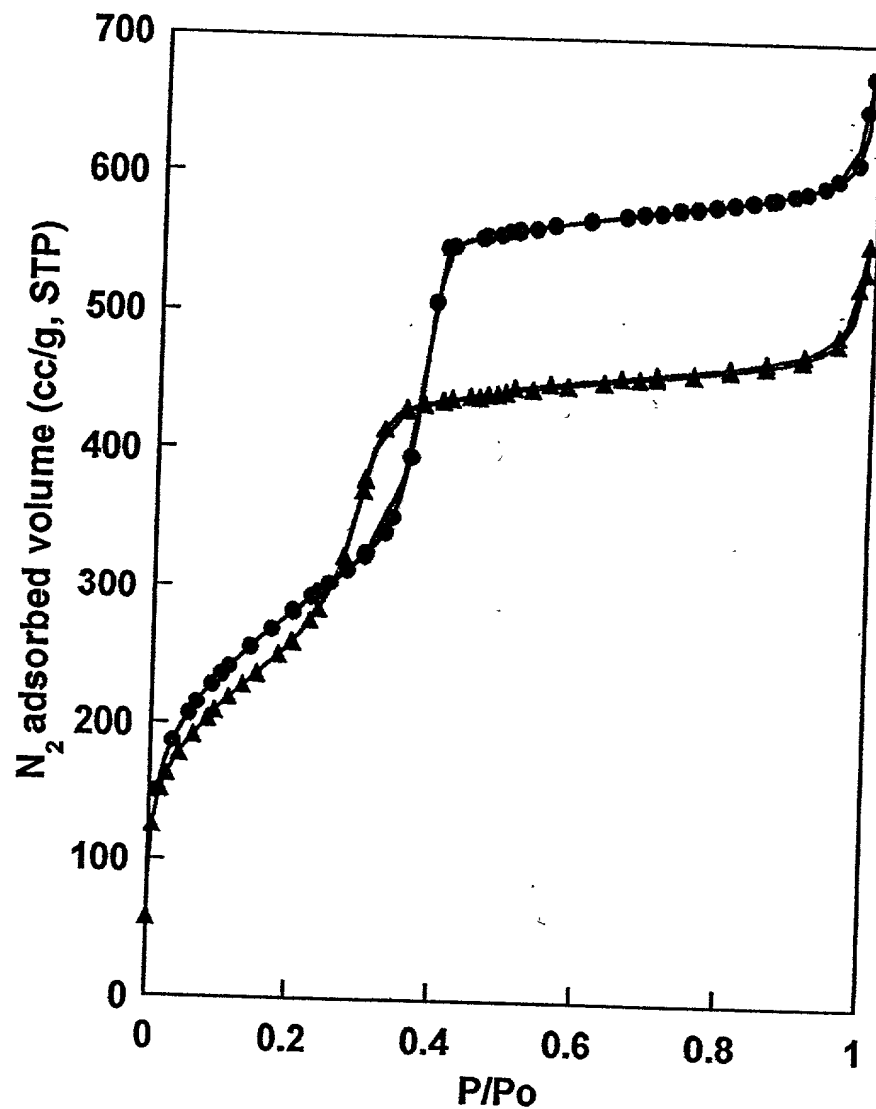


FIGURE 36A

FIGURE 37 (Example 33)

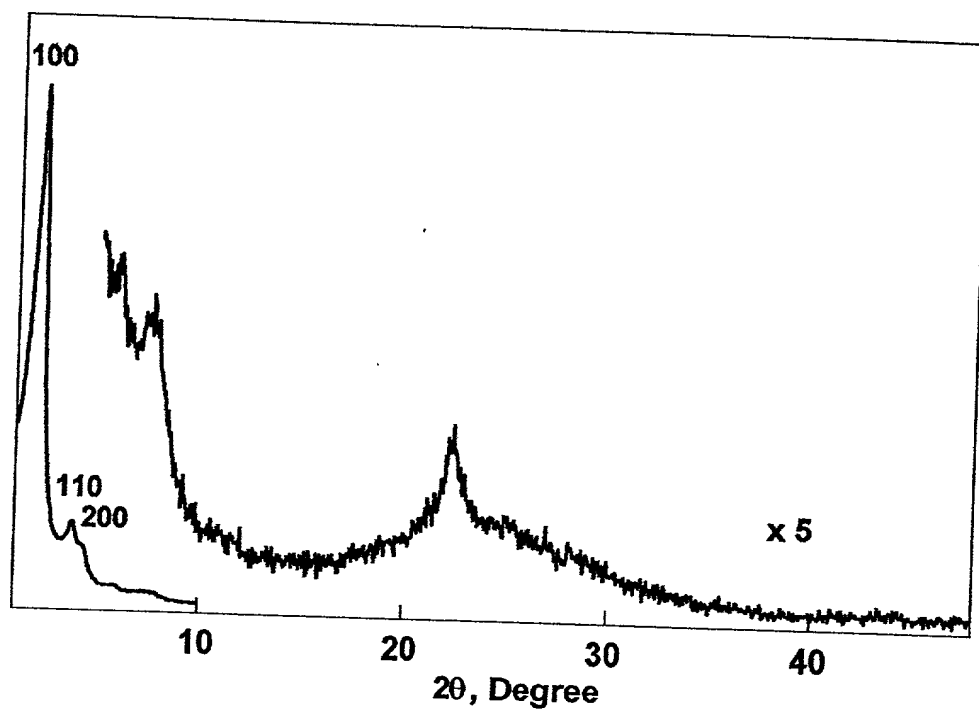


FIGURE 38 (Example 33)

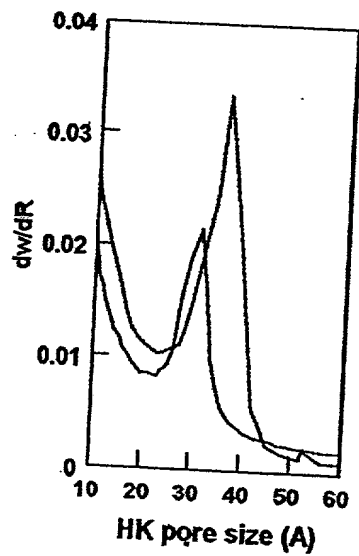
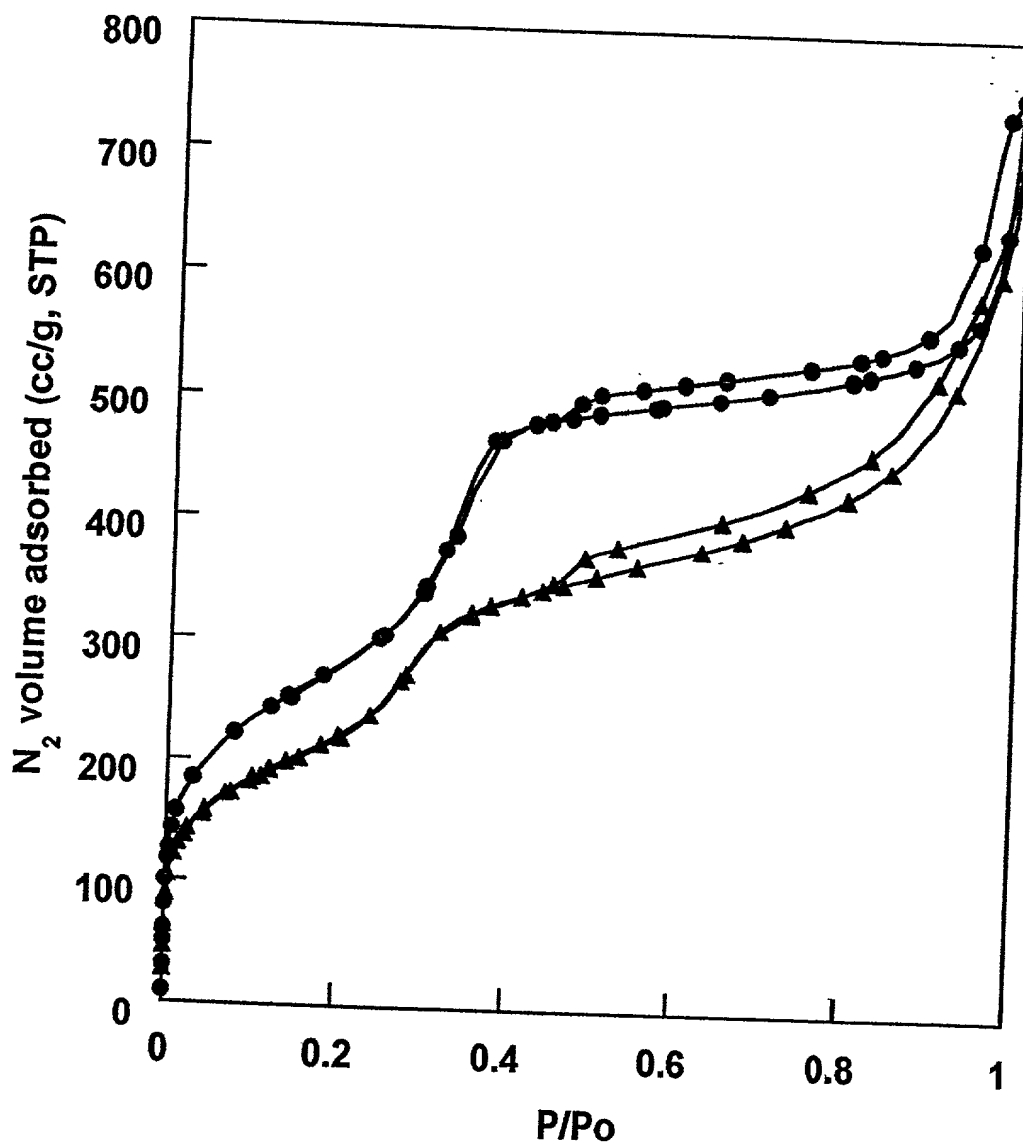


FIGURE 38A

FIGURE 39 (Example 34)

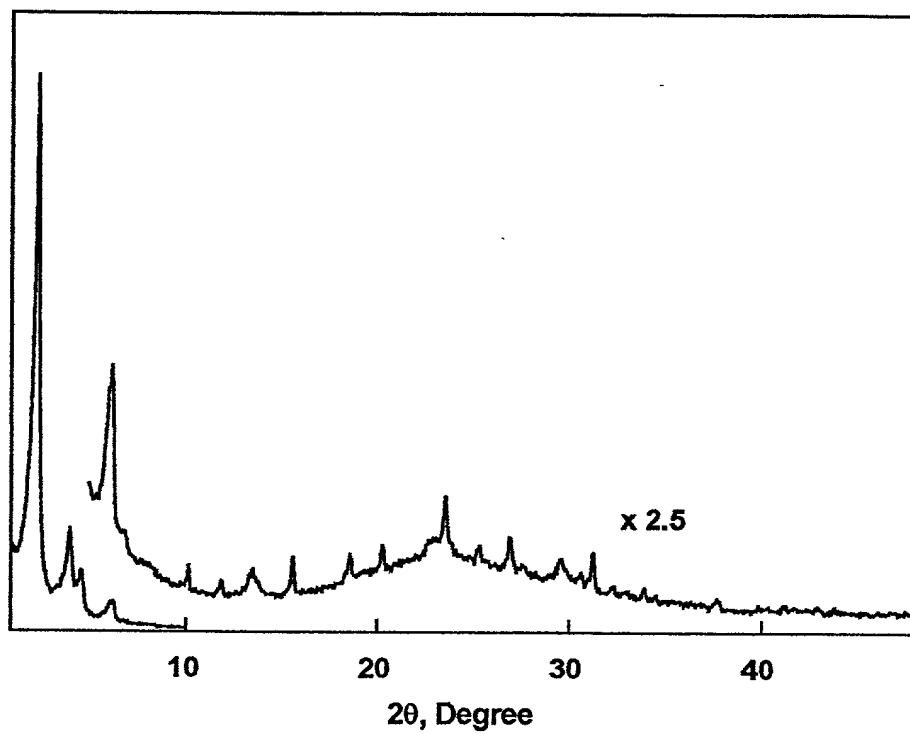




FIGURE 40 (Example 34)

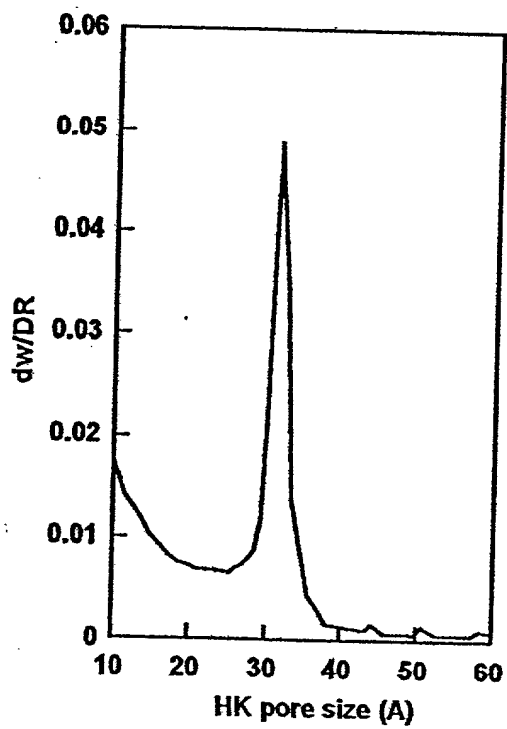
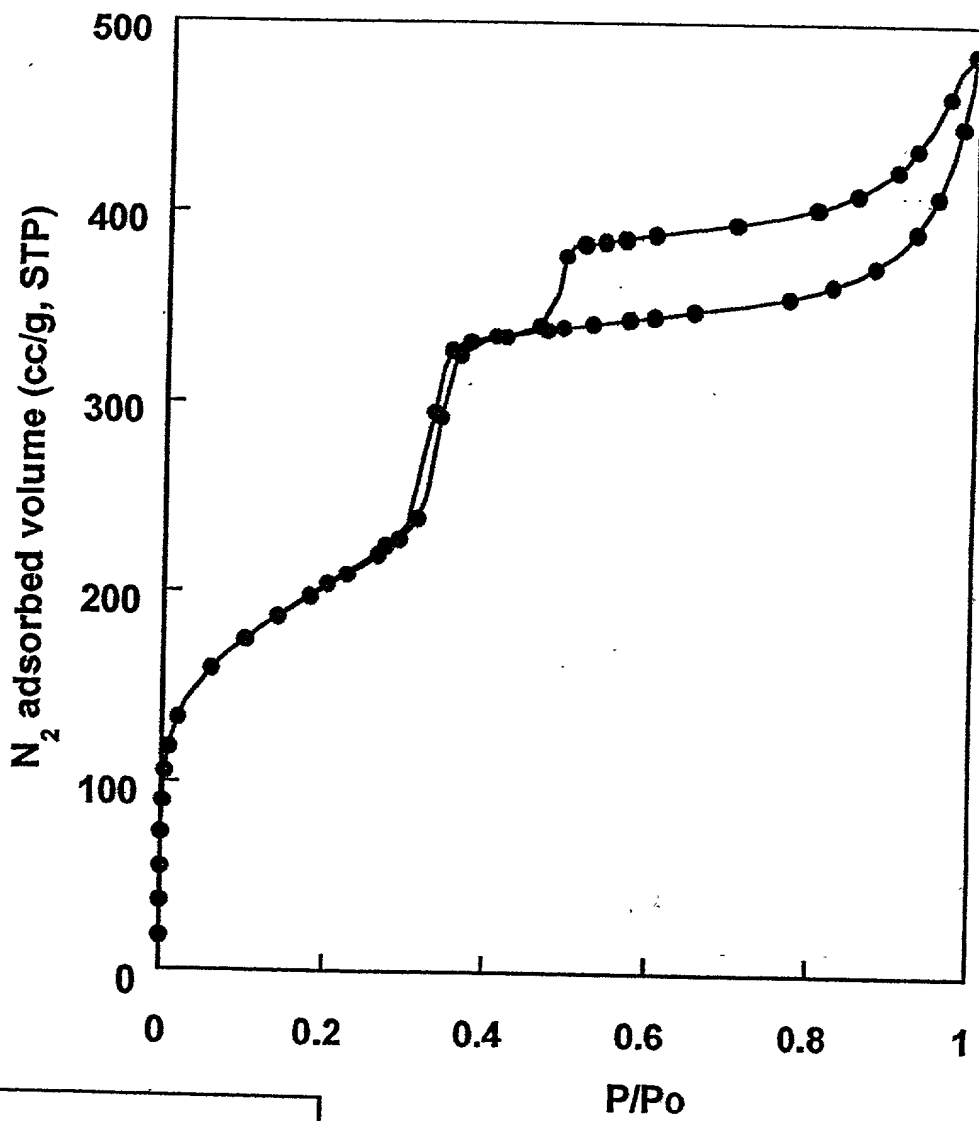


FIGURE 40A

FIGURE 41 (Example 35)

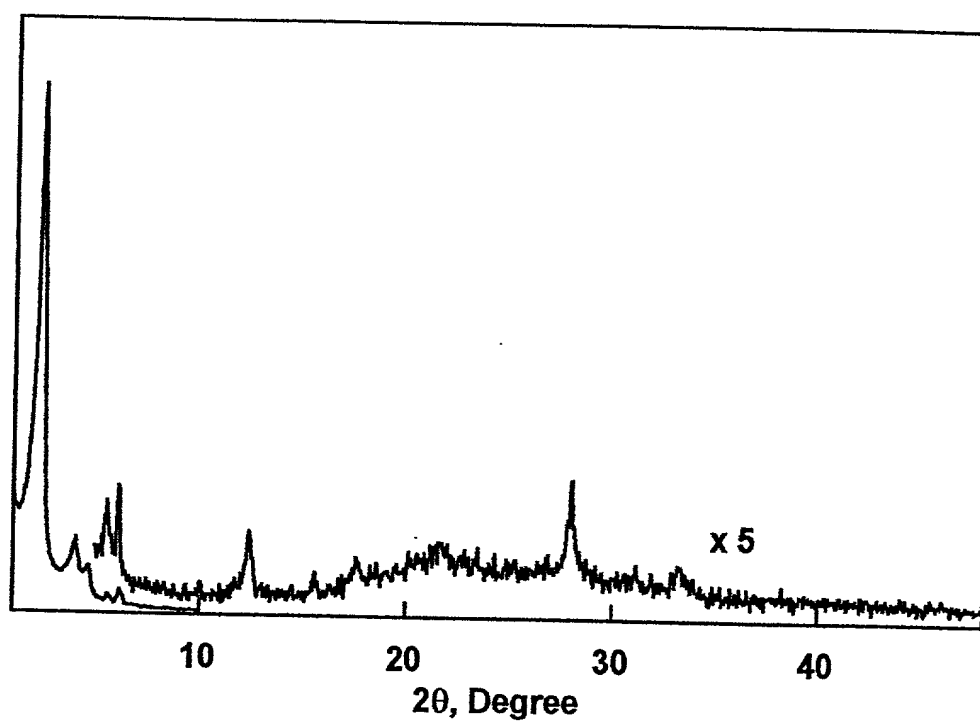


FIGURE 42 (Example 35)

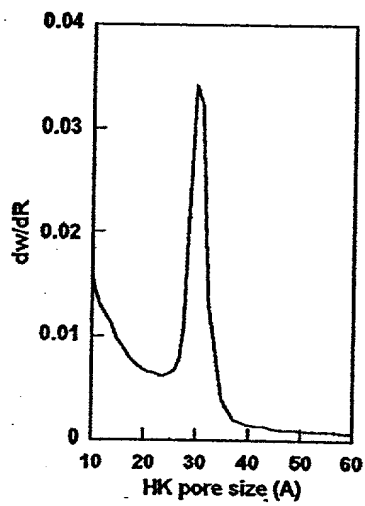
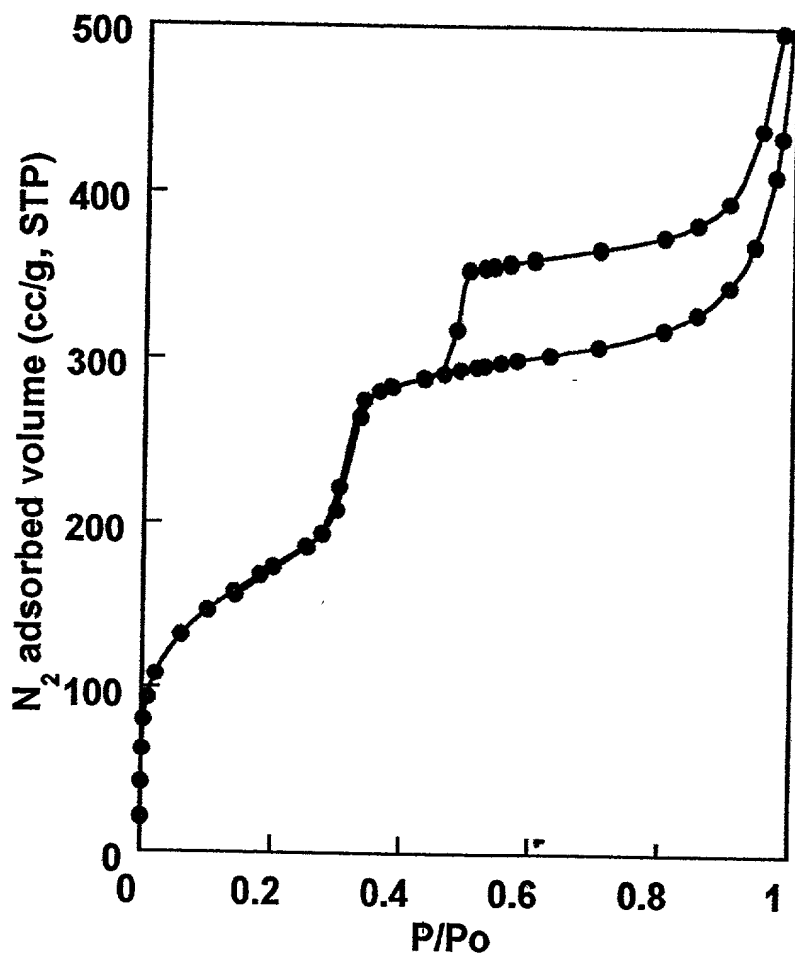


FIGURE 42A

FIGURE 43 (Example 36)

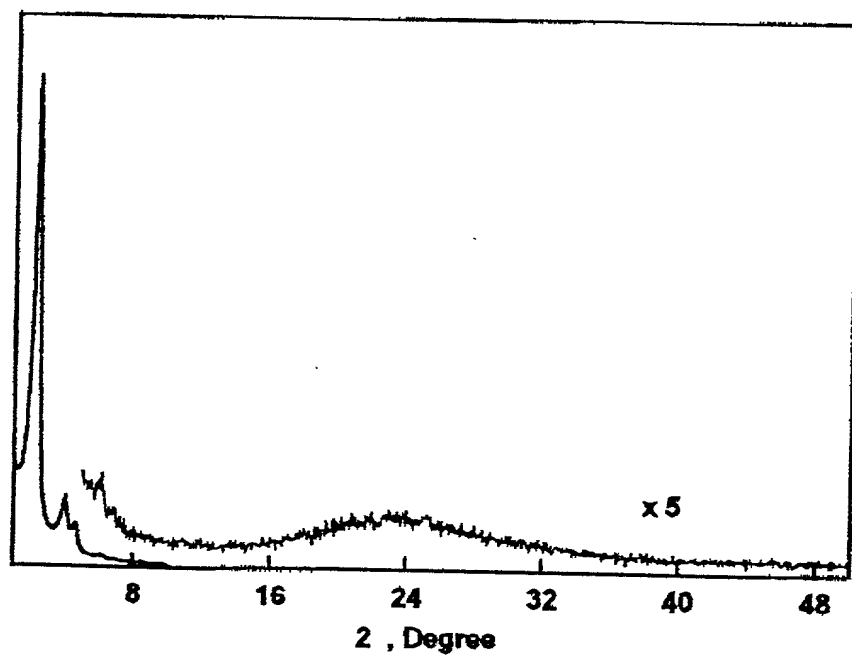


FIGURE 44 (Example 36)

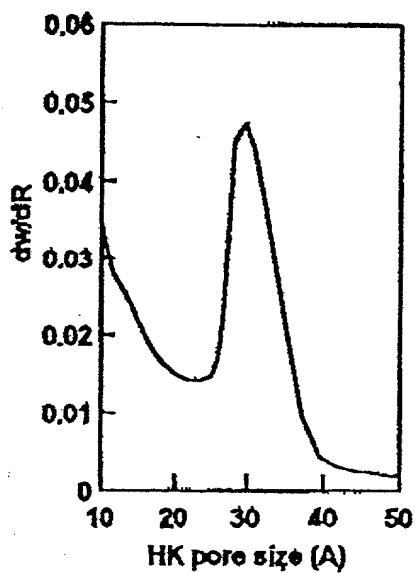
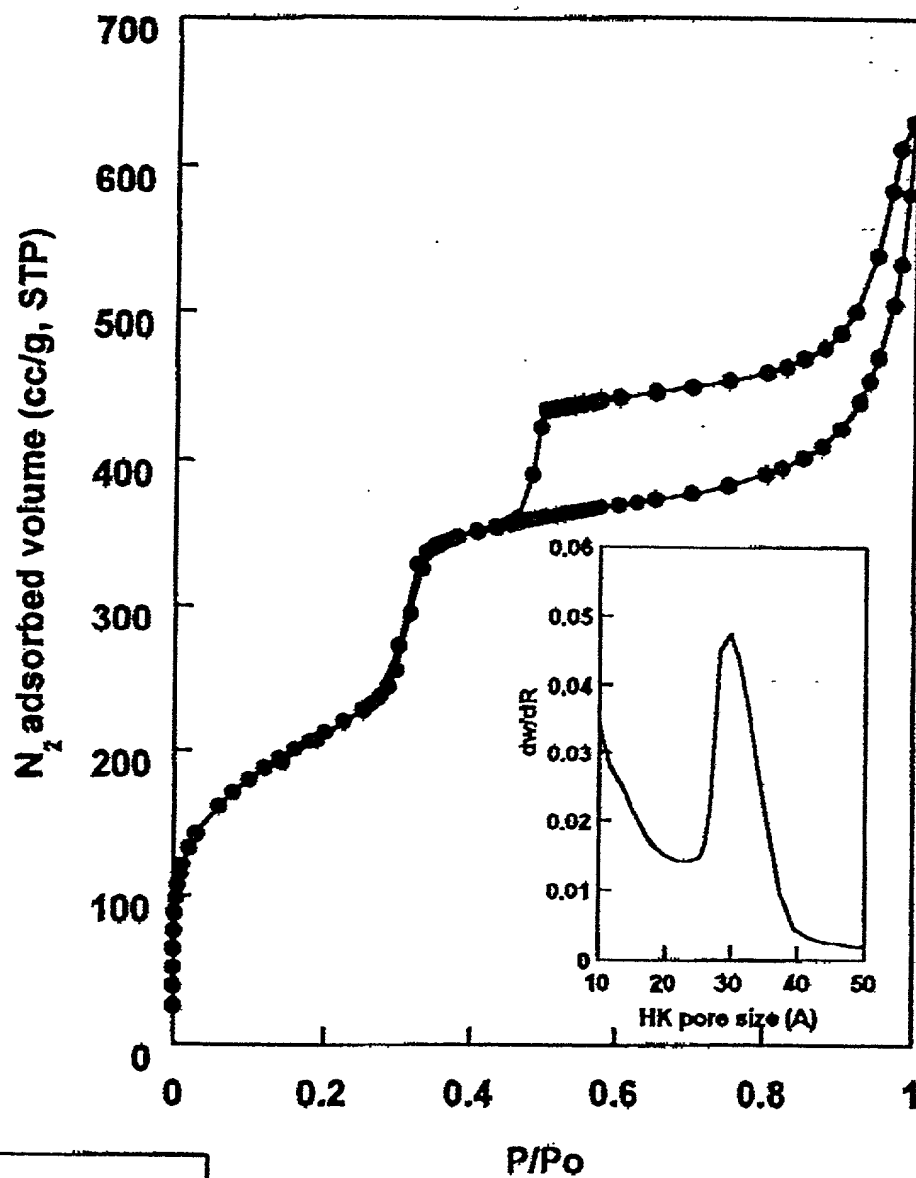


FIGURE 44A

FIGURE 45 (Example 37)

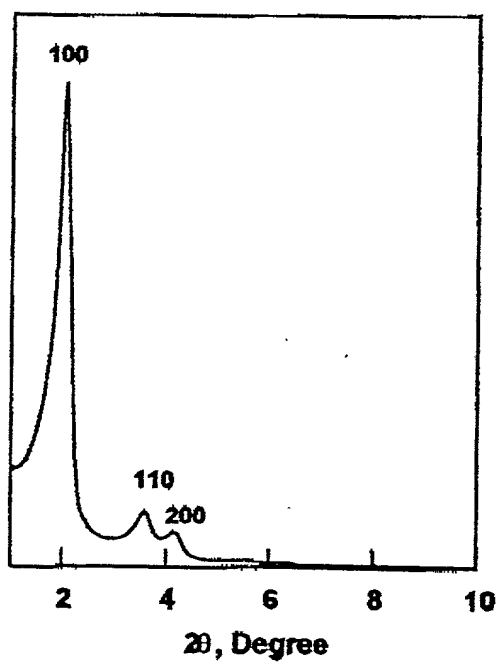
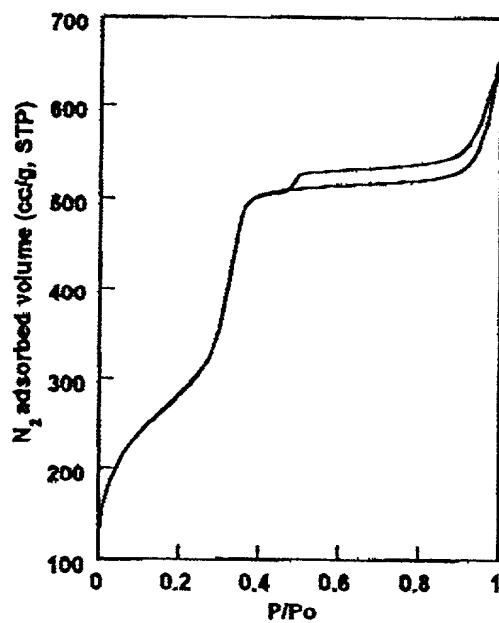


FIGURE 46 (Example 37)



10035647-131301

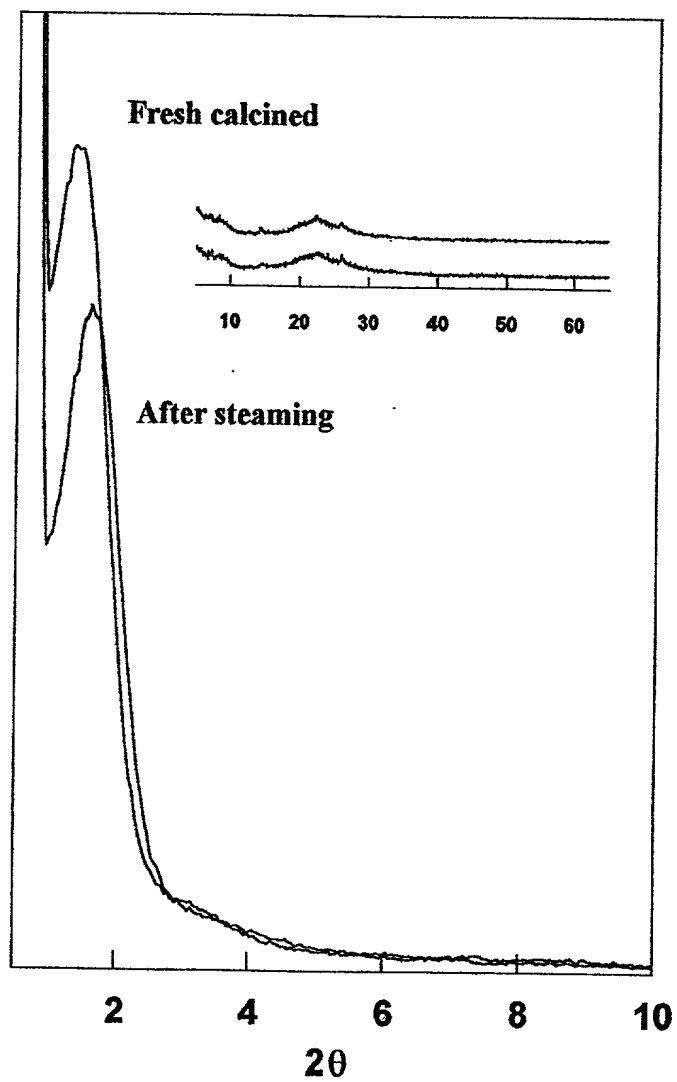


FIGURE 47

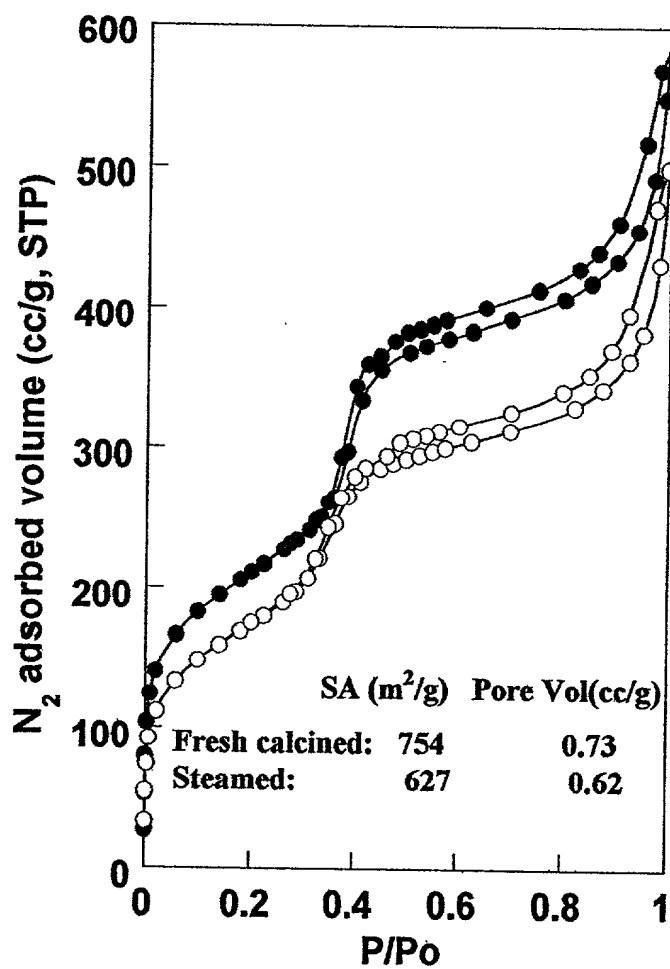


FIGURE 48



1005547 121901

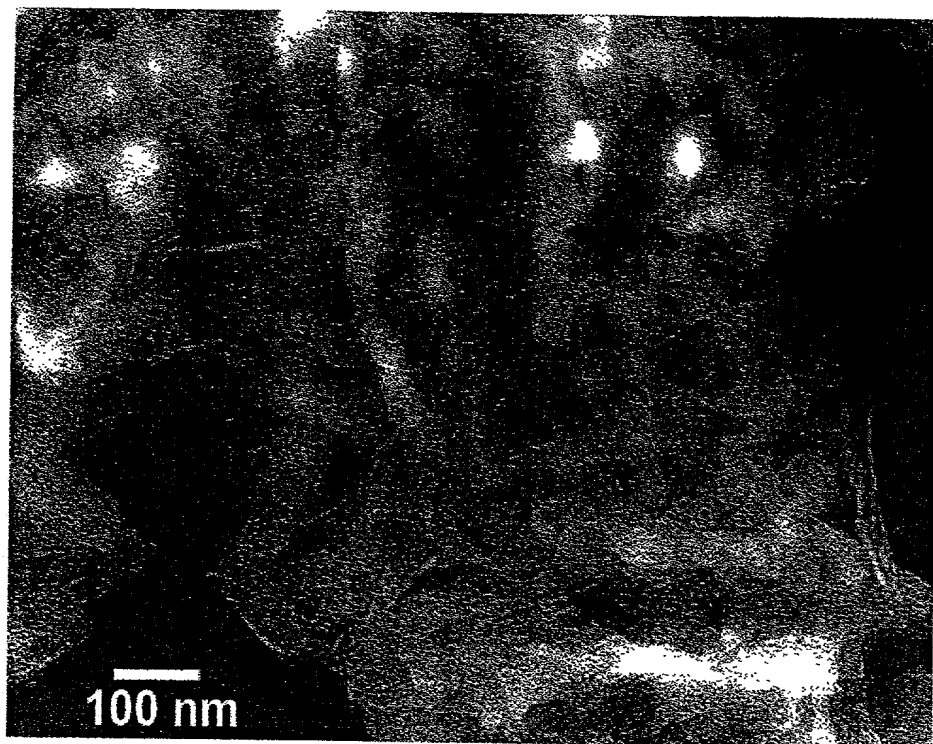


FIGURE 49

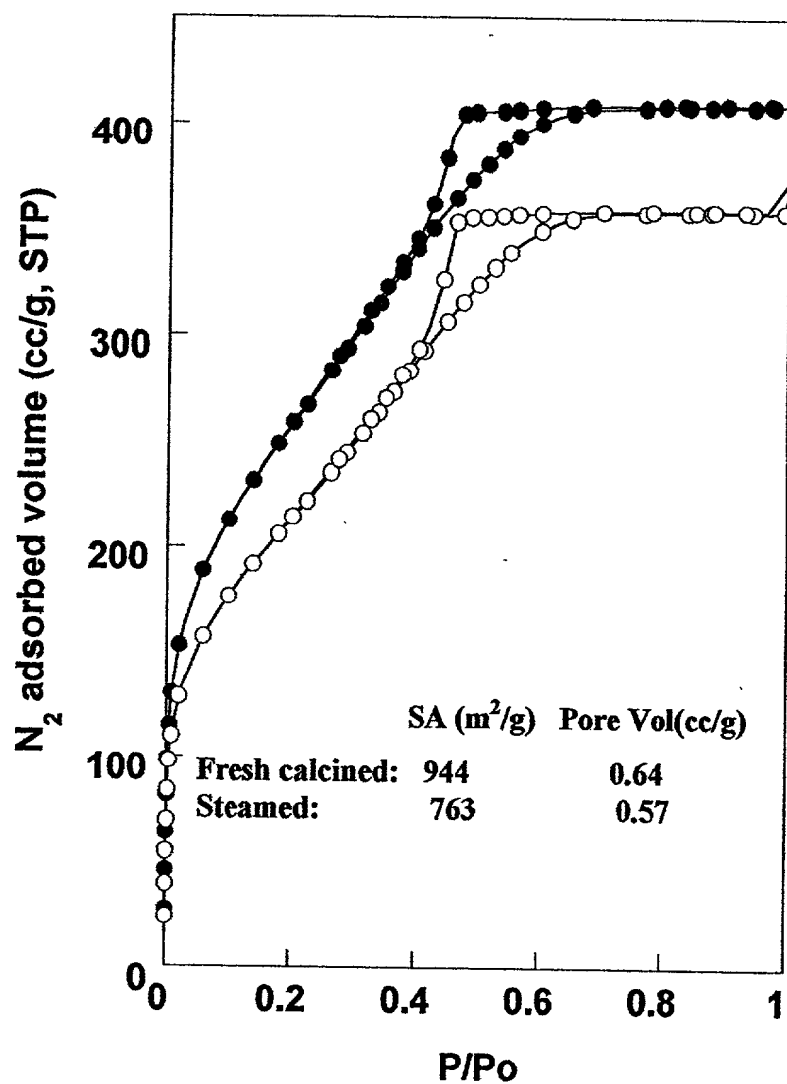


FIGURE 50

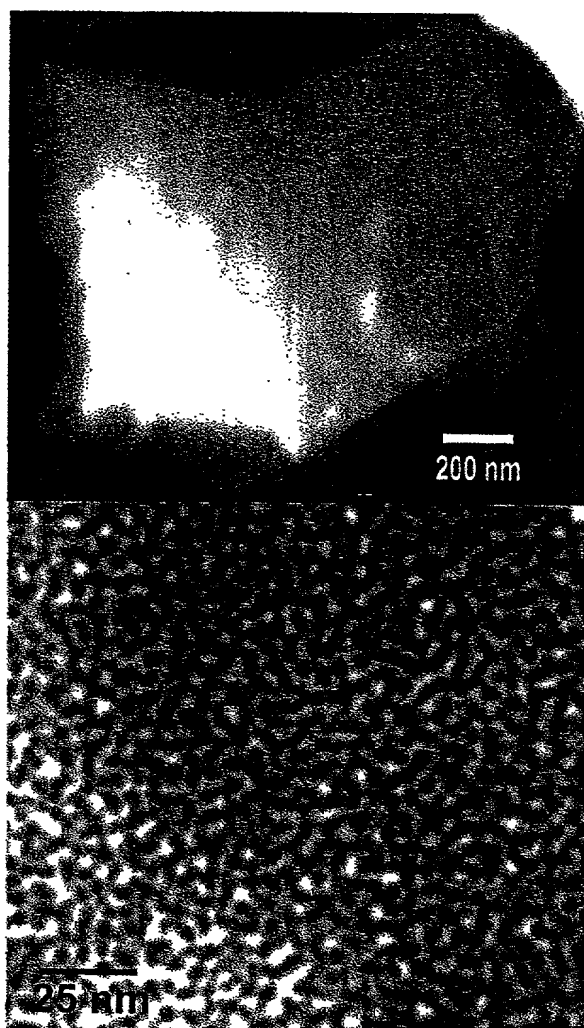


FIGURE 51